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DAMSCHEN-ENTRANCO

January 20, 2000

Pat Potts
Montana Department of Environmental Quality
P.O. Box 200901
Helena, MT 59620-0901

RECEIVED
JAN 25 2000

MONTANA
DEPT. OF ENVIRONMENTAL QUALITY
COMMUNITY SERVICES BUREAU

Dear Ms. Potts:

Enclosed please find the results of the Autumn, 1999 ground-water monitoring event at the Sanitation, Inc. landfill in Lewistown, Montana. Sampling was undertaken on October 6, 1999.

Ground-Water Flow

The static water level in all wells were very close to those measured in the spring of 1999. Recovery rates after bailing were very similar to those measured in the past, so it is assumed that there have been no significant changes in the saturated zone characteristics.

The hydraulic gradient varied from the eastern side of the site to the western side. The gradient is usually steeper on the western edge of the facility, and measurements from the last visit conformed with this trend. The hydraulic gradient (I) near SIMW-1 and -2 can be measured from the enclosed map to be about 0.043. The gradient near SIMW-3 and SIP-1 is about 0.12. Using the previously-accepted estimated porosity (n_e) of 0.35, the seepage velocity (V_s) and discharge (Q) can be calculated for the area around each of the wells. The hydraulic conductivity (K) for the area around SIMW-1 and -2 was measured at 2.6×10^{-2} cm/sec (75 ft/day). Using

$$V_s = KI/n_e$$

the seepage velocity for the area around SIMW-1 can be calculated as 3.25×10^{-3} cm/day (9.2 ft/day). The hydraulic conductivity around SIMW-3 was measured at 3.2×10^{-3} cm/sec (9.2 ft/day), with a resulting seepage velocity of 1.1×10^{-3} cm/sec (3.15 ft/day).

Ground-Water Quality

Volatile organic compounds (VOCs) were not detected in monitoring wells SIMW-2 or -3. Two volatile organic compound were discovered in the sample from SIMW-1, carbon disulfide at 17 micrograms per liter ($\mu\text{g/l}$) and dichlorodifluoromethane estimated at 0.54

PO BOX 4817
2030 11th AVENUE
SUITE 11
HELENA, MONTANA
59604

TELEPHONE
406 449 8627
FAX
406 449 8631

ARIZONA
CALIFORNIA
IDAHO
MONTANA
NEW MEXICO
OREGON
UTAH
WASHINGTON

µg/l. Carbon disulfide was also found in the sample from SIMW-3 in a concentration of 1.9 and 1.7 µg/l for the sample and the duplicate, respectively. The dichlorodifluoromethane has been noted previously at this facility, and occurred in a concentration below the practical quantitation limit. The presence of the carbon disulfide is unusual, however. This particular analyte has not been found in other samples taken at this facility. Carbon disulfide has appeared randomly in analytical results from many facilities, occurring as a one-time event that is not clearly related to contamination. This being the case, we are not inclined to be unduly concerned about its presence in this instance. We recommend no action at the moment, as this may well prove to be a laboratory contaminant.

Four inorganic analytes were shown via analysis of variance (ANOVA) to exceed background levels, assuming SIMW-1 represents background. Using intrawell prediction interval analysis, there were no exceedences noted. The ANOVA anomalies were noted for chloride (50 mg/l), sulfate (193 mg/l) and specific conductance (1100 µmho/cm) in monitoring well SIMW-2, along with nitrate/nitrite nitrogen (11.5 mg/l) in monitoring well SIMW-3.

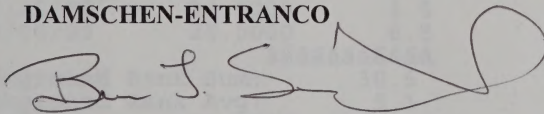
As noted in our previous correspondence regarding this facility, the dissolved metals that were found in the sample from SIMW-3 in June, 1999 did not appear in this sample. There were no significant changes in any of the indicator parameters before, during or after that sampling date that would imply the presence of a slug of contaminants moving through. We are left with the conclusion that this was an anomaly resulting from sampling or laboratory contamination.

You will note that there was no duplicate analysis performed for inorganic constituents. This was due to a mixup between myself and the engineer who performed the sampling. We collected two individual samples for VOCs, so a duplicate analysis was run on for that well. My apologies for the oversight.

We recommend that the Sanitation, Inc. facility continue sampling on a semi-annual basis for Table 1 analytes. If you have any questions or require any additional information, please do not hesitate to contact us.

Sincerely,

DAMSCHE-ENTRANCO

A handwritten signature in dark ink, appearing to read 'Bruce L. Siegmund', with a large, stylized loop at the end.

Bruce L. Siegmund
Project Hydrogeologist

Enclosures

CC: William Spoya

Facility:D&A160 Sanitation, Inc.

Address:P.O. Box 882

City:Lewistown
County:FERGUS

ST:MT Zip:59457

Contact:Bill Spoya
Phone:() -

Permit Type:Background

Constituent:Chld dis Chloride, dissolved

CAS Number:16887-00-6

MCL: 0.000 mg/l

ACL: 0.000 mg/l

Detect Limit: 0.001 mg/l

Start Date:Aug 16 1995

End Date:Jan 01 2001

Data Mode:Original

Background Wells

Well ID	N	%ND	Max Value	Min Value	Mean	Std Dev
SIMW-1	6	0	26.00	23.00	24.50	1.05

Compliance Wells

Well ID	N	%ND	Max Value	Min Value	Mean	Std Dev
SIMW-2	11	0	63.00	30.00	53.36	9.17
SIMW-3	10	0	34.00	23.00	28.50	3.75

Well ID	Date	Observation	Rank
SIMW-1	08/16/95	26.0000	9.0
SIMW-1	06/03/97	25.0000	6.5
SIMW-1	11/04/97	24.0000	3.5
SIMW-1	06/15/99	23.0000	1.5
SIMW-1	06/15/99	24.0000	3.5
SIMW-1	10/06/99	25.0000	6.5

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Background Rank Sum: 30.5

Background Rank Avg: 5.1

SIMW-2	08/16/95	55.0000	21.0
SIMW-2	06/10/96	47.0000	18.0
SIMW-2	10/22/96	62.0000	26.0
SIMW-2	06/03/97	63.0000	27.0
SIMW-2	11/04/97	58.0000	24.0
SIMW-2	06/16/98	56.0000	22.5
SIMW-2	06/16/98	59.0000	25.0
SIMW-2	10/06/98	56.0000	22.5
SIMW-2	10/06/98	51.0000	20.0

Facility: Davis

Address: P.O. Box 281

City: Lawrence
County: Kansas

Contact: Bill Spivey
Phone: (785) 843-1111

Unit Type: Backhoe

Equipment: Child Resistant Assembly

AS Number: 18847-00-2

WCL: 0.000 mg/l
ACL: 0.000 mg/l
MLL: 0.000 mg/l

Test Date: Aug 18 1997
End Date: Aug 01 1997

Model: Original

Ground Wells

Well ID	WCL	ACL	MLL	Test Date
GW-1	0	0	0	8/18/97

Surface Wells

Well ID	WCL	ACL	MLL	Test Date
SW-1	0	0	0	8/18/97
SW-2	0	0	0	8/18/97

Well ID	Date	WCL	ACL	MLL
GW-1	08/18/97	0.000	0.000	0.000
GW-2	08/18/97	0.000	0.000	0.000
GW-3	08/18/97	0.000	0.000	0.000
GW-4	08/18/97	0.000	0.000	0.000
GW-5	08/18/97	0.000	0.000	0.000
GW-6	08/18/97	0.000	0.000	0.000
GW-7	08/18/97	0.000	0.000	0.000
GW-8	08/18/97	0.000	0.000	0.000
GW-9	08/18/97	0.000	0.000	0.000
GW-10	08/18/97	0.000	0.000	0.000

Back-ground Water Data
Back-ground Water Log

Well ID	Date	WCL	ACL	MLL
GW-1	08/18/97	0.000	0.000	0.000
GW-2	08/18/97	0.000	0.000	0.000
GW-3	08/18/97	0.000	0.000	0.000
GW-4	08/18/97	0.000	0.000	0.000
GW-5	08/18/97	0.000	0.000	0.000
GW-6	08/18/97	0.000	0.000	0.000
GW-7	08/18/97	0.000	0.000	0.000
GW-8	08/18/97	0.000	0.000	0.000
GW-9	08/18/97	0.000	0.000	0.000
GW-10	08/18/97	0.000	0.000	0.000

SIMW-2	06/15/99	30.000	13.5
SIMW-2	10/06/99	50.000	19.0
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Compliance Well Rank Sum:		238.5	
Compliance Well Rank Avg:		21.7	
SIMW-3	08/16/95	34.0000	16.5
SIMW-3	06/10/96	30.0000	13.5
SIMW-3	10/22/96	34.0000	16.5
SIMW-3	06/03/97	27.0000	10.5
SIMW-3	11/04/97	30.0000	13.5
SIMW-3	11/04/97	30.0000	13.5
SIMW-3	06/16/98	23.0000	1.5
SIMW-3	10/06/98	25.0000	6.5
SIMW-3	06/15/99	25.0000	6.5
SIMW-3	10/06/99	27.0000	10.5
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Compliance Well Rank Sum:	109.0
Compliance Well Rank Avg:	10.9

H Statistic:	19.4009
H Adjusted for Ties:	19.5501
Degrees of Freedom:	2
Chi-Squared:	5.9915
ZÁ/DF:	1.9600

* Indicates significant evidence of contamination

Well ID	Crit. Diff.	Rank Avg.	Background Rank Avg.	Difference
*SIMW-2	7.8953	21.68	5.08	16.60
SIMW-3	8.0335	10.90	5.08	5.82

Prediction Intervals

Report Printed: 01-21-2000 14:52

Facility:D&A160 Sanitation, Inc.

Address:P.O. Box 882

City:Lewistown
County:FERGUS

ST:MT Zip:59457

Contact:Bill Spoya
Phone:() -

Permit Type:Background

Constituent:Chld dis Chloride, dissolved

CAS Number:16887-00-6

MCL: 0.000 mg/l

ACL: 0.000 mg/l

Detect Limit: 0.001 mg/l

Start Date:Aug 16 1995

End Date:Jan 01 2001

Data Mode:Original

Background Data

Well ID	Date	Observation
SIMW-2	08/16/95	55000.0000
SIMW-2	06/10/96	47000.0000
SIMW-2	10/22/96	62000.0000
SIMW-2	06/03/97	63000.0000
SIMW-2	11/04/97	58000.0000
SIMW-2	06/16/98	56000.0000
SIMW-2	06/16/98	59000.0000
SIMW-2	10/06/98	56000.0000
SIMW-2	10/06/98	51000.0000
SIMW-2	06/15/99	30000.0000

Summary Statistics

Observations: 10
 Mean: 53700.000
 Std Dev: 9592.241
 Shapiro-Wilk: 0.813

Prediction Limit: 78141.298
 Significance Level: 0.0500

Date Range: 10/06/95-12/31/99
 Observations: 1
 Mean: 50000.000
 Upper Limit: 78141.298
 * Since the Mean for this period exceeds the upper prediction limit, there is significant evidence of contamination.

Cusack-Wallace Test
 Report Printed: 01-31-2000 14:55

Facility: Dettig
 Contamination, Inc.
 Address: P.O. Box 942
 City: Lewistown
 County: MARIETTA
 State: MT Zip: 59417
 Contact: Bill Speys
 Phone: 409-838-7500

Result Type: Background

Comments: 409-838-7500

CAS Method: 16008-75-3
 MCL: 0.500 mg/l
 MCLG: 0.000 mg/l
 Detract Limit: 0.502 mg/l

Start Date: Aug 15 1995
 Exp Date: Jan 01 2001

Data Mode: Original

Background Value

Well ID	W-IND	Max Value	Min Value	Mean	Std Dev
SIMW-2	5	65.00	76.00	8.11	8.12

1% Critical Value: 0.781
5% Critical Value: 0.842

Future Data

Well:SIMW-2

Date Observation

10/06/99 50000.0000

Summary Statistics

Observations: 1
Mean: 53700.000
Std Dev: 9592.241

Prediction Intervals

Significance Level:0.050000

Date Range	Observations	Mean	Interval
10/06/99-12/31/99	1	50000.000	[0.0- 72141.898]

* Since the Mean for this period exceeds the upper prediction limit,
there is significant evidence of contamination.

Kruskal-Wallace Test

Report Printed: 01-21-2000 14:52

Facility:D&A160 Sanitation, Inc.

Address:P.O. Box 882

City:Lewistown ST:MT Zip:59457
County:FERGUS

Contact:Bill Spoya
Phone:() -

Permit Type:Background

Constituent:SO4 dis Sulfate, dissolved

CAS Number:14808-79-8

MCL: 0.000 mg/l

ACL: 0.000 mg/l

Detect Limit: 0.001 mg/l

Start Date:Aug 16 1995

End Date:Jan 01 2001

Data Mode:Original

Background Wells

Well ID	N %ND	Max Value	Min Value	Mean	Std Dev
SIMW-1	6 0	95.00	76.00	83.33	8.12

Compliance Wells

Well ID	N	%ND	Max Value	Min Value	Mean	Std Dev
SIMW-2	11	0	224.00	177.00	201.18	12.57
SIMW-3	10	0	140.00	121.00	131.00	5.96

Well ID	Date	Observation	Rank
SIMW-1	08/16/95	95.0000	6.0
SIMW-1	06/03/97	92.0000	5.0
SIMW-1	11/04/97	81.0000	4.0
SIMW-1	06/15/99	77.0000	2.0
SIMW-1	06/15/99	76.0000	1.0
SIMW-1	10/06/99	79.0000	3.0

Background Rank Sum: 21.0			
Background Rank Avg: 3.5			
SIMW-2	08/16/95	224.0000	27.0
SIMW-2	06/10/96	195.0000	20.0
SIMW-2	10/22/96	214.0000	26.0
SIMW-2	06/03/97	202.0000	22.5
SIMW-2	11/04/97	211.0000	25.0
SIMW-2	06/16/98	201.0000	21.0
SIMW-2	06/16/98	202.0000	22.5
SIMW-2	10/06/98	203.0000	24.0
SIMW-2	10/06/98	191.0000	18.0
SIMW-2	06/15/99	177.0000	17.0
SIMW-2	10/06/99	193.0000	19.0

Compliance Well Rank Sum: 242.0			
Compliance Well Rank Avg: 22.0			
SIMW-3	08/16/95	140.0000	16.0
SIMW-3	06/10/96	139.0000	15.0
SIMW-3	10/22/96	133.0000	13.0
SIMW-3	06/03/97	134.0000	14.0
SIMW-3	11/04/97	131.0000	11.5
SIMW-3	11/04/97	131.0000	11.5
SIMW-3	06/16/98	129.0000	10.0
SIMW-3	10/06/98	128.0000	9.0
SIMW-3	06/15/99	121.0000	7.0
SIMW-3	10/06/99	124.0000	8.0

Compliance Well Rank Sum: 115.0	
Compliance Well Rank Avg: 11.5	

H Statistic:	22.6667
H Adjusted for Ties:	22.6805
Degrees of Freedom:	2
Chi-Squared:	5.9915
Z $\sqrt{A}/DF$:	1.9600

* Indicates significant evidence of contamination

Well ID	Crit. Diff.	Rank Avg.	Background Rank Avg.	Difference
*SIMW-2	7.8953	22.00	3.50	18.50
SIMW-3	8.0335	11.50	3.50	8.00

Facility:D&A160

itation, Inc.

Address:P.O. Box 882

City:Lewistown
County:FERGUS

ST:MT Zip:59457

Contact:Bill Spoya
Phone:() -

Permit Type:Background

Constituent:SO4 dis Sulfate, dissolved

CAS Number:14808-79-8

MCL: 0.000 mg/l

ACL: 0.000 mg/l

Detect Limit: 0.001 mg/l

Start Date:Aug 16 1995

End Date:Jan 01 2001

Data Mode:Original

Background Data

Well ID	Date	Observation
SIMW-2	08/16/95	224000.0000
SIMW-2	06/10/96	195000.0000
SIMW-2	10/22/96	214000.0000
SIMW-2	06/03/97	202000.0000
SIMW-2	11/04/97	211000.0000
SIMW-2	06/16/98	201000.0000
SIMW-2	06/16/98	202000.0000
SIMW-2	10/06/98	203000.0000
SIMW-2	10/06/98	191000.0000
SIMW-2	06/15/99	177000.0000

Summary Statistics

Observations: 10
Mean: 202000.000
Std Dev: 12935.739
Shapiro-Wilk: 0.971

1% Critical Value: 0.781
5% Critical Value: 0.842

Future Data

Well:SIMW-2

Date Observation
10/06/99 193000.0000

Summary Statistics

Observations: 1
Mean: 202000.000
Std Dev: 12935.739

Prediction Intervals

Significance Level:0.050000

Date Range	Observations	Mean	Interval
10/06/99-12/31/99	1	193000.000	[0.0- 226870.063]

* Since the Mean for this period exceeds the upper prediction limit,
there is significant evidence of contamination.

Kruskal-Wallace Test
Report Printed: 01-21-2000 14:52

Facility:D&A160 Sanitation, Inc.
Address:P.O. Box 882
City:Lewistown ST:MT Zip:59457
County:FERGUS
Contact:Bill Spoya
Phone:() -

Permit Type:Background

Constituent:Cond Specific Conductivity

CAS Number: - -
MCL: 0.000 umhos/cm
ACL: 0.000 umhos/cm
Detect Limit: 1.000 umhos/cm

Start Date:Aug 16 1995
End Date:Jan 01 2001

Data Mode:Original

Background Wells

Well ID	N	%ND	Max Value	Min Value	Mean	Std Dev
SIMW-1	6	0	958.00	686.00	773.83	97.51

Compliance Wells

Well ID	N	%ND	Max Value	Min Value	Mean	Std Dev
SIMW-2	11	0	1480.00	1040.00	1166.36	111.74
SIMW-3	10	0	893.00	683.00	748.70	57.54

Well ID	Date	Observation	Rank
SIMW-1	08/16/95	958.0000	16.0
SIMW-1	06/03/97	786.0000	14.0
SIMW-1	11/04/97	751.0000	10.0
SIMW-1	06/15/99	686.0000	2.0
SIMW-1	06/15/99	703.0000	3.0
SIMW-1	10/06/99	759.0000	11.0

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Background Rank Sum:		56.0
Background Rank Avg:		9.3
SIMW-2	08/16/95	1480.0000 27.0
SIMW-2	06/10/96	1180.0000 25.5
SIMW-2	10/22/96	1180.0000 25.5
SIMW-2	06/03/97	1040.0000 17.0
SIMW-2	11/04/97	1110.0000 19.0
SIMW-2	06/16/98	1150.0000 22.5
SIMW-2	06/16/98	1150.0000 22.5
SIMW-2	10/06/98	1140.0000 21.0
SIMW-2	10/06/98	1130.0000 20.0
SIMW-2	06/15/99	1170.0000 24.0
SIMW-2	10/06/99	1100.0000 18.0

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Compliance Well Rank Sum:		242.0
Compliance Well Rank Avg:		22.0
SIMW-3	08/16/95	893.0000 15.0
SIMW-3	06/10/96	750.0000 9.0
SIMW-3	10/22/96	706.0000 4.0
SIMW-3	06/03/97	683.0000 1.0
SIMW-3	11/04/97	767.0000 12.5
SIMW-3	11/04/97	767.0000 12.5
SIMW-3	06/16/98	739.0000 7.0
SIMW-3	10/06/98	731.0000 6.0
SIMW-3	06/15/99	707.0000 5.0
SIMW-3	10/06/99	744.0000 8.0

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Compliance Well Rank Sum:		80.0
Compliance Well Rank Avg:		8.0

H Statistic:	18.9630
H Adjusted for Ties:	18.9803
Degrees of Freedom:	2
Chi-Squared:	5.9915
ZÁ/DF:	1.9600

* Indicates significant evidence of contamination

Well ID	Crit. Diff.	Rank Avg.	Background Rank Avg.	Difference
*SIMW-2	7.8953	22.00	9.33	12.67
SIMW-3	8.0335	8.00	9.33	-1.33

Prediction Intervals

Report Printed: 01-21-2000 14:53

Facility:D&A160

itation, Inc.

Address:P.O. Box 882

City:Lewistown
County:FERGUS

ST:MT Zip:59457

Contact:Bill Spoya
Phone:() -

Permit Type:Background

Constituent:Cond Specific Conductivity

CAS Number: - -

MCL: 0.000 umhos/cm

ACL: 0.000 umhos/cm

Detect Limit: 1.000 umhos/cm

Start Date:Aug 16 1995

End Date:Jan 01 2001

Data Mode:Original

Background Data

Well ID	Date	Observation
SIMW-2	08/16/95	1480.0000
SIMW-2	06/10/96	1180.0000
SIMW-2	10/22/96	1180.0000
SIMW-2	06/03/97	1040.0000
SIMW-2	11/04/97	1110.0000
SIMW-2	06/16/98	1150.0000
SIMW-2	06/16/98	1150.0000
SIMW-2	10/06/98	1140.0000
SIMW-2	10/06/98	1130.0000
SIMW-2	06/15/99	1170.0000

Summary Statistics

Observations: 10
Mean: 1173.000
Std Dev: 115.475
Shapiro-Wilk: 0.695

Start Date:Aug 16 1995
End Date:Jan 01 2001

Data Mode:Original

Background Wells

Well ID	Min Value	Max Value	Mean	Std Dev
SIMW-1	0.00	2.00	1.00	0.70

1% Critical Value: 0.781
5% Critical Value: 0.842

Future Data

Well:SIMW-2

Date Observation
10/06/99 1100.0000

Summary Statistics

Observations: 1
Mean: 1173.000
Std Dev: 115.475

Prediction Intervals

Significance Level:0.050000

Date Range	Observations	Mean	Interval
10/06/99-12/31/99	1	1100.000	[0.0- 1395.010]

* Since the Mean for this period exceeds the upper prediction limit,
there is significant evidence of contamination.

Kruskal-Wallace Test

Report Printed: 01-21-2000 14:53

Facility:D&A160 Sanitation, Inc.

Address:P.O. Box 882

City:Lewistown ST:MT Zip:59457
County:FERGUS

Contact:Bill Spoya
Phone:() -

Permit Type:Background

Constituent:NO3/NO2 Nitrate,Nitrite

CAS Number: - -
MCL: 0.000 mg/l
ACL: 0.000 mg/l
Detect Limit: 0.000 mg/l

Start Date:Aug 16 1995
End Date:Jan 01 2001

Data Mode:Original

Background Wells

Well ID	N %ND	Max Value	Min Value	Mean	Std Dev
SIMW-1	8 0	5.56	3.74	4.46	0.70

Compliance Wells

Well ID	N	%ND	Max Value	Min Value	Mean	Std Dev
SIMW-2	11	0	4.18	2.11	3.08	0.77
SIMW-3	10	0	12.20	8.96	10.15	1.29

Well ID	Date	Observation	Rank
SIMW-1	08/16/95	4.4900	17.0
SIMW-1	06/10/96	4.2400	16.0
SIMW-1	06/03/97	5.5600	19.0
SIMW-1	11/04/97	3.7400	8.0
SIMW-1	10/06/98	5.5200	18.0
SIMW-1	06/15/99	4.0400	12.5
SIMW-1	06/15/99	4.0400	12.5
SIMW-1	10/06/99	4.0600	14.0

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Background Rank Sum:			117.0
Background Rank Avg:			14.6
SIMW-2	08/16/95	3.7800	9.0
SIMW-2	06/10/96	4.1800	15.0
SIMW-2	10/22/96	2.6000	5.0
SIMW-2	06/03/97	2.1100	1.0
SIMW-2	11/04/97	3.9500	10.0
SIMW-2	06/16/98	2.3200	2.0
SIMW-2	06/16/98	2.3700	3.0
SIMW-2	10/06/98	3.9700	11.0
SIMW-2	10/06/98	2.8300	6.0
SIMW-2	06/15/99	3.2600	7.0
SIMW-2	10/06/99	2.4600	4.0

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Compliance Well Rank Sum:			73.0
Compliance Well Rank Avg:			6.6
SIMW-3	08/16/95	8.9600	20.0
SIMW-3	06/10/96	9.2500	24.0
SIMW-3	10/22/96	9.0900	22.0
SIMW-3	06/03/97	9.0800	21.0
SIMW-3	11/04/97	9.5300	25.0
SIMW-3	11/04/97	9.2000	23.0
SIMW-3	06/16/98	12.2000	29.0
SIMW-3	10/06/98	11.0000	26.0
SIMW-3	06/15/99	11.7000	28.0
SIMW-3	10/06/99	11.5000	27.0

áááááááááááá			
Compliance Well Rank Sum:			245.0
Compliance Well Rank Avg:			24.5

H Statistic:	23.0770
H Adjusted for Ties:	23.0827
Degrees of Freedom:	2
Chi-Squared:	5.9915
ZÁ/DF:	1.9600

* Indicates significant evidence of contamination

Well ID	Crit. Diff.	Rank Avg.	Background Rank Avg.	Difference
SIMW-2	7.7277	6.64	14.63	-7.99
*SIMW-3	7.8887	24.50	14.63	9.88

Prediction Intervals

Facility:D&A160 Sanitation, Inc.

Address:P.O. Box 882

City:Lewistown

ST:MT Zip:59457

County:FERGUS

Contact:Bill Spoya

Phone: () -

Permit Type:Background

Constituent:NO3/NO2 Nitrate,Nitrite

CAS Number: -

MCL: 0.000 mg/l

ACL: 0.000 mg/l

Detect Limit: 0.000 mg/l

Start Date:Aug 16 1995

End Date:Jan 01 2001

Data Mode:Original

Background Data

Well ID	Date	Observation
SIMW-3	08/16/95	8960.0000
SIMW-3	06/10/96	9250.0000
SIMW-3	10/22/96	9090.0000
SIMW-3	06/03/97	9080.0000
SIMW-3	11/04/97	9530.0000
SIMW-3	11/04/97	9200.0000
SIMW-3	06/16/98	12200.0000
SIMW-3	10/06/98	11000.0000
SIMW-3	06/15/99	11700.0000

Summary Statistics

Observations: 9
Mean: 10001.111
Std Dev: 1270.310
Shapiro-Wilk: 0.643

1% Critical Value: 0.764
 5% Critical Value: 0.829

Future Data

Well: SIMW-3

Date Observation
 10/06/99 11500.0000

Summary Statistics

Observations: 1
 Mean: 10001.111
 Std Dev: 1270.310

Prediction Intervals

Significance Level: 0.050000

Date Range	Observations	Mean	Interval
10/06/99-12/31/99	1	11500.000	[0.0- 12491.091]

* Since the Mean for this period exceeds the upper prediction limit, there is significant evidence of contamination.

Parameter	<0.05	<0.01	<0.001	<0.0001	0.05-0.01	0.01-0.001	0.001-0.0001
Asbestos	<0.005	<0.001	102	<0.002	0.002	0.003-0.001	10/15/99
Boron	<0.1	<0.1	99	<0.1	1.0	0.01-1	10/15/99
Beryllium	<0.001	<0.001	34	<0.001	0.001	0.001-0.001	10/15/99
Cadmium	<0.001	<0.001	36	<0.001	0.001	0.001-0.001	10/15/99
Chromium	<0.01	<0.01	46	<0.01	1.01	0.01-1.01	10/15/99
Copper	<0.01	<0.01	97	<0.01	0.01	0.01-1.01	10/15/99
Coarse	0.01	0.01	99	<0.01	1.01	0.01-1.01	10/15/99
Iron	0.01	0.01	99	<0.01	1.01	0.01-0.01	10/15/99
Lead	<0.01	<0.01	102	<0.01	0.01	0.01-0.01	10/15/99
Manganese	<0.001	<0.001	104	<0.001	0.001	0.001-0.001	10/15/99
Nickel	<0.01	<0.01	97	<0.01	0.01	0.01-0.01	10/15/99
Polonium	0.017	0.017	105	<0.002	0.001	0.001-0.001	10/15/99
Silver	<0.005	<0.005	34	<0.005	0.005	0.005-0.005	10/15/99
Thallium	<0.1	<0.1	99	<0.1	1.0	0.1-1.0	10/15/99
Vanadium	<0.1	<0.1	101	<0.1	1.0	0.1-1.0	10/15/99
Zinc	0.01	0.01	99	<0.01	1.01	0.01-1.01	10/15/99

Lab Nos. 99-57909-1-5

QUALITY ASSURANCE DATA PACKAGE

This report includes the results of quality assurance tests performed with the sample analyses. They are performed to determine if the methodology is in control and to monitor the laboratory's ability to produce accurate and precise results.

Constituents	Duplicate Analysis			Spiked	-----Calibration Verification-----			Date Analyzed
	-----mg/l (ppm)-----			Analysis,	Blank	Sample	Acceptance	
	Original	Duplicate	Recovery	%	mg/l (ppm)	mg/l (ppm)	mg/l (ppm)	
Chloride	36	36	109		<1	13	11-14	10/13/99
Sulfate	<1	2	98		<1	50	45-55	10/13/99
Specific Conductance, μ mhos/cm	744	741	N/A		1	N/A	N/A	10/12/99
pH, s.u.	7.3	7.3	N/A		N/A	N/A	N/A	10/12/99
Chemical Oxygen Demand	15	13	94		<1	80	70-94	10/14/99
Nitrate + Nitrite as N	4.06	4.03	93		<0.05	2.36	2.04-2.56	10/12/99
Cyanide, Total	0.048	0.049	104		<0.005	0.180	0.137-0.241	10/13/99
Dissolved Metals								
Antimony	<0.05	<0.05	97		<0.05	0.97	0.90-1.10	10/13/99
Arsenic	<0.005	<0.005	103		<0.005	0.050	0.045-0.055	10/15/99
Barium	<0.1	<0.1	98		<0.1	1.0	0.9-1.1	10/13/99
Beryllium	<0.001	<0.001	95		<0.001	0.501	0.450-0.550	10/13/99
Cadmium	<0.001	<0.001	96		<0.001	0.050	0.045-0.055	10/15/99
Chromium	<0.01	<0.01	99		<0.01	1.01	0.90-1.10	10/13/99
Cobalt	<0.01	<0.01	97		<0.01	0.98	0.90-1.10	10/13/99
Copper	0.10	0.11	99		<0.01	1.00	0.90-1.10	10/13/99
Iron	0.27	0.27	98		<0.03	4.98	4.50-5.50	10/13/99
Lead	<0.01	<0.01	100		<0.01	0.05	0.04-0.06	10/15/99
Mercury	<0.001	<0.001	104		<0.001	0.005	0.004-0.006	10/15/99
Nickel	<0.01	<0.01	87		<0.01	0.05	0.04-0.06	10/15/99
Selenium	0.017	0.017	105		<0.005	0.051	0.045-0.055	10/15/99
Silver	<0.005	<0.005	84		<0.005	0.019	0.018-0.022	10/15/99
Thallium	<0.1	<0.1	95		<0.1	1.0	0.9-1.1	10/13/99
Vanadium	<0.1	<0.1	103		<0.1	1.0	0.9-1.1	10/13/99
Zinc	0.85	0.86	99		<0.01	1.00	0.90-1.10	10/13/99

EPA METHOD 8260B: QUALITY ASSURANCE MATRIX SPIKE REPORT

Quality Control Sample: Matrix Spike Analysis 18-OCT-1999 17:53

Lab No.: 001-99-57859

Report Date: 10/19/99 10:40

Extraction Method: EPA 5030

Sample Matrix: WATER

File: /IONTRAP1.i/vb101899.b/14oct18.d

Remarks: These compounds were spiked into the sample matrix to determine if the sample matrix contributes bias to the analytical results and to monitor the accuracy of the methodology.

CONCENTRATION UNITS = ug/L (ppb)

Spike Compound	Spike Added	Sample Concentration	Matrix Spike Concentration	MS %Rec	QC Limits
=====	=====	=====	=====	=====	=====
Benzene	5.00	<1.00	4.28	86	60--140
Chlorobenzene	5.00	<1.00	5.08	102	60--140
1,1-Dichloroethene	5.00	<1.00	4.33	87	60--140
Toluene	5.00	<1.00	4.95	99	60--140
Trichloroethene	5.00	<1.00	5.91	118	60--140

SURROGATE RECOVERY REPORT

Surrogate Compound	Added-ug/L	Measured-ug/L	%Rec	QC Limits
1,2-Dichloroethane d4	10.0	9.08	91	80--120
Toluene d8	10.0	10.2	102	80--120
p-Bromofluorobenzene	10.0	9.87	99	80--120

EPA METHOD 8260B: QUALITY ASSURANCE MATRIX SPIKE DUPLICATE REPORT

Quality Control Sample: Matrix Spike Duplicate Analysis 18-OCT-1999 18:34

Lab No.: 001-99-57859

File: /IONTRAP1.i/vb101899.b/15oct18.d

Remarks: These compounds were again spiked into the sample matrix to determine if the sample matrix contributes bias to the analytical results and to monitor the accuracy and precision of the methodology.

CONCENTRATION UNITS = ug/L (ppb)

Spike Compound	Spike Added	Matrix Spike Dup. Conc.	MSD %Rec	%RPD	RPD	---QC Limits-- Rec
=====	=====	=====	=====	=====	=====	=====
Benzene	5.00	4.51	90	5	11	60--140
Chlorobenzene	5.00	4.70	94	8	13	60--140
1,1-Dichloroethene	5.00	4.78	96	10	14	60--140
Toluene	5.00	5.15	103	4	13	60--140
Trichloroethene	5.00	5.54	111	6	14	60--140

SURROGATE RECOVERY REPORT

Surrogate Compound	Added-ug/L	Measured-ug/L	%Rec	QC Limits
1,2-Dichloroethane d4	10.0	9.52	95	80--120
Toluene d8	10.0	10.1	101	80--120
p-Bromofluorobenzene	10.0	10.5	105	80--120

REPORT COMMENTS: None

Analyst: LR Reviewing Supervisor: msj

EPA METHOD 8260B: QUALITY ASSURANCE BLANK MATRIX SPIKE REPORT

Quality Control Sample: Reference Sample Analysis 15-OCT-1999 11:51

Report Date: 10/19/99 10:48

Extraction Method: EPA 5030

Sample Matrix: WATER

File: /IONTRAP1.i/vb101599.b/03oct15.d

Remarks: This reference sample was spiked into a blank sample matrix then extracted and analyzed with your set of samples to determine if the methodology is in control and to monitor the laboratory's ability to produce accurate results.

Spike Compound	CONCENTRATION UNITS = ug/L (ppb)			
	Added	Measured	%Rec	QC Limits
=====	=====	=====	=====	=====
Acetone	50.0	49.1	98	60--140
Benzene	5.00	4.77	95	60--140
Bromochloromethane	5.00	4.82	96	60--140
Bromodichloromethane	5.00	4.91	98	60--140
Bromoform	5.00	4.74	95	60--140
Bromomethane	5.00	3.92	78	60--140
Carbon tetrachloride	5.00	5.18	104	60--140
Chlorobenzene	5.00	5.54	111	60--140
Chloroethane	5.00	4.71	94	60--140
Chloroform	5.00	4.74	95	60--140
Chloromethane	5.00	4.74	95	60--140
1,2-Dibromo-3-chloropropane	5.00	4.08	82	60--140
1,2-Dibromoethane	5.00	4.97	99	60--140
Dibromomethane	5.00	5.54	111	60--140
1,2-Dichlorobenzene	5.00	5.02	100	60--140
1,4-Dichlorobenzene	5.00	5.22	104	60--140
Dichlorodifluoromethane	5.00	5.52	110	60--140
1,1-Dichloroethane	5.00	5.04	101	60--140
1,1-Dichloroethene	5.00	4.88	98	60--140
cis-1,2-Dichloroethene	5.00	4.65	93	60--140
trans-1,2-Dichloroethene	5.00	5.13	103	60--140
1,2-Dichloropropane	5.00	4.87	97	60--140
cis-1,3-Dichloropropene	5.00	5.20	104	60--140
trans-1,3-Dichloropropene	5.00	4.62	92	60--140
2-Hexanone	50.0	49.0	98	60--140
Methyl isobutyl ketone	50.0	44.3	89	60--140
Methylene chloride	5.00	4.40	88	60--140
Methyl ethyl ketone	50.0	48.6	97	60--140
Styrene	5.00	5.03	101	60--140
1,1,1,2-Tetrachloroethane	5.00	5.05	101	60--140
1,1,2,2-Tetrachloroethane	5.00	4.86	97	60--140
Tetrachloroethene	5.00	5.68	114	60--140
Toluene	5.00	5.53	111	60--140
1,1,1-Trichloroethane	5.00	5.08	102	60--140
1,1,2-Trichloroethane	5.00	5.50	110	60--140
Trichloroethene	5.00	5.63	113	60--140
Trichlorofluoromethane	5.00	4.50	90	60--140
1,2,3-Trichloropropane	5.00	4.56	91	60--140
Vinyl chloride	5.00	5.07	101	60--140
m+p-Xylenes	10.0	10.6	106	60--140
o-Xylene	5.00	4.96	99	60--140
-----	-----	-----	-----	-----
SURROGATE RECOVERY REPORT				
Surrogate Compound	Added-ug/L	Measured-ug/L	%Rec	QC Limits
1,2-Dichloroethane d4	10.0	9.18	92	80--120
Toluene d8	10.0	10.4	104	80--120
p-Bromofluorobenzene	10.0	10.1	101	80--120

REPORT COMMENTS: None

Analyst: Reviewing Supervisor:

Date: 12-OCT-99

Received by: Pam Harder

Logged In by: Pam Harder

SAMPLE CONDITION QA/QC REPORT

This report provides information about the condition of the sample(s)
and associated sample custody information on receipt at the laboratory.

Chain of Custody Form
Completed & Signed

Yes Comments: _____

Chain of Custody Seal

No Comments: _____

Intact

N/A Comments: _____

Signature Match Chain of Custody vs. Seal

N/A Comments: _____

Samples Received Cold

Yes Comments: _____

Samples Received Within Holding Time

Yes Comments: _____

Samples Received in Proper Containers

Yes Comments: _____

Samples Received Properly Preserved

Yes Comments: _____

Samples requiring analysis for volatile organics are tested for proper preservation at the time of analysis.
Any preservation problems encountered for these samples are noted on the analytical parameter report pages.

Client notified about sample discrepancies:

Who: Bruce Siegmund

By: Pam Harder

Date/Time: 10/12/99

Method of Shipping: ARS Ground - \$2.13

Additional comments: Use one of the vials on SIMW-3 and run duplicate 8260.



Received Date: 10/12/09 Cust. No.: 01043
Login Date: 7 Custody Seal: Yes/☒ No
Shipped by: ARS Ground Intact: Yes/☒ No
Shipping Bill #: _____ Signature Match?: Yes/☒ No
Code Six: X If no - Reason: _____

[illegible]

DAMSCHEEN & ASSOCIATES, INC.

Landfill Monitoring Well Sample Report

Project Name/Number Sanitation Inc Well Number 5144W-1

Sampler(s) Stim Miller

Date 10/6/99 Time _____

Conditions 48° clear color

Field Data: Table (circle) 1 2

Depth to Water 45.90 Total Depth 47.5

Volume of Water Purged Did not purge

Temperature--#1 _____ --#2 _____ --#3 _____ --#4 _____

Conductivity--#1 _____ --#2 _____ --#3 _____ --#4 1020

pH--#1 _____ --#2 _____ --#3 _____ --#4 _____

Check off; if not taken, make note in Comments section:

1000 ml, 6, w/ no preservative _____
250 ml w/ H₂SO₄ (yellow) ✓
250 ml w/ HNO₃ (red), filtered ✓
250 ml w/ NaOH (green) ✓
500 ml w/ no preservative ✓
40 ml, 2, w/ HCl (blue) ✓

Comments (attach change of instrumentation information to this sheet if necessary):

DAMSCHEEN & ASSOCIATES, INC.

Landfill Monitoring Well Sample Report

Project Name/Number Sanitation Inc Well Number SMW-2

Sampler(s) Slam Miller

Date 10/6/99 Time _____

Conditions 18° clear color

Field Data: Table (circle) 1 2

Depth to Water 35.96 Total Depth 42.4

Volume of Water Purged bailed dry

Temperature--#1 _____ --#2 _____ --#3 _____ --#4 _____

Conductivity--#1 _____ --#2 _____ --#3 _____ --#4 1500

pH--#1 _____ --#2 _____ --#3 _____ --#4 _____

Check off; if not taken, make note in Comments section:

1000 ml, 6, w/ no preservative _____
250 ml w/ H₂SO₄ (yellow) ✓
250 ml w/ HNO₃ (red), filtered ✓
250 ml w/ NaOH (green) ✓
500 ml w/ no preservative ✓
40 ml, 2, w/ HCl (blue) ✓

Comments (attach change of instrumentation information to this sheet if necessary):

DAMSCHEEN & ASSOCIATES, INC.

Landfill Monitoring Well Sample Report

Project Name/Number Sanitation Inc Well Number S1 MW-3

Sampler(s) Shirley Miller

Date 10/6/99 Time 9:00 AM

Conditions 48° F clear color

Field Data: Table (circle) 1 2

Depth to Water 31.74 Total Depth 39.4

Volume of Water Purged bailed dry

Temperature--#1 _____ --#2 _____ --#3 _____ --#4 _____

Conductivity--#1 2000 --#2 _____ --#3 1015 --#4 1015

pH--#1 _____ --#2 _____ --#3 _____ --#4 _____

Check off; if not taken, make note in Comments section:

1000 ml, 6, w/ no preservative Not taken
250 ml w/ H₂SO₄ (yellow) ✓
250 ml w/ HNO₃ (red), filtered ✓
250 ml w/ NaOH (green) ✓
500 ml w/ no preservative ✓
40 ml, 2, w/ HCl (blue) ✓

Comments (attach change of instrumentation information to this sheet if necessary):

DAMSCHEEN & ASSOCIATES, INC.

Landfill Monitoring Well Sample Report

Project Name/Number Sanitation Inc Well Number SIP-2

Sampler(s) Shin Miller

Date 10/6/99 Time _____

Conditions 48° clear calm

Field Data:

Table (circle) 1 2

Depth to Water 52.18 Total Depth 57

Volume of Water Purged N/A

Temperature--#1 _____ --#2 _____ --#3 _____ --#4 _____

Conductivity--#1 _____ --#2 _____ --#3 _____ --#4 _____

pH--#1 _____ --#2 _____ --#3 _____ --#4 _____

Check off; if not taken, make note in Comments section:

1000 ml, 6, w/ no preservative _____

250 ml w/ H₂SO₄ (yellow) _____

250 ml w/ HNO₃ (red), filtered _____

250 ml w/ NaOH (green) _____

500 ml w/ no preservative _____

40 ml, 2, w/ HCl (blue) _____

Comments (attach change of instrumentation information to this sheet if necessary):

DAMSCHEM & ASSOCIATES, INC.

Landfill Monitoring Well Sample Report

Project Name/Number Sanitation Inc Well Number SIP-1

Sampler(s) Shir Miller

Date 10/6/99 Time _____

Conditions _____

Field Data:

Table (circle) 1 2

Depth to Water 34.95 Total Depth 40

Volume of Water Purged N/A

Temperature--#1 _____ --#2 _____ --#3 _____ --#4 _____

Conductivity--#1 _____ --#2 _____ --#3 _____ --#4 _____

pH--#1 _____ --#2 _____ --#3 _____ --#4 _____

Check off; if not taken, make note in Comments section:

1000 ml, 6, w/ no preservative _____
250 ml w/ H₂SO₄ (yellow) _____
250 ml w/ HNO₃ (red), filtered _____
250 ml w/ NaOH (green) _____
500 ml w/ no preservative _____
40 ml, 2, w/ HCl (blue) _____

Comments (attach change of instrumentation information to this sheet if necessary):

**ENERGY LABORATORIES, INC.**P.O. BOX 30916 • 1120 SOUTH 27TH STREET • BILLINGS, MT 59107-0916 • PHONE (406) 252-6325
FAX (406) 252-6069 • 1-800-735-4489 • E-MAIL eli@energylab.com**LABORATORY ANALYSIS REPORT****Damschen-Entranco
Bruce Siegmund
PO Box 4817
Helena, MT 59604****Project ID: SANITATION INC
Sample ID: SIMW-1
Laboratory ID: 99-57909-1
Sample Matrix: Water
Sample Date: 06-Oct-99 1045
Received at lab: 12-Oct-99****RECEIVED****OCT 29 1999****DAMSCHEN-ENTRANCO****Reported: 19-Oct-99**

	Results	Units	Qual	Reporting		Method	Analyzed	
				Limit				
Chloride	25	mg/l		1		EPA 300.0	13-Oct-99 1224	RLH
Sulfate	79	mg/l		1		EPA 300.0	13-Oct-99 1224	RLH
Specific Conductance @ 25 C	759	umhos/cm		1		EPA 120.1	12-Oct-99 1504	QED
pH	7.2	s.u.		0.1		EPA 150.1	12-Oct-99 1504	QED
Chemical Oxygen Demand	< 1	mg/l	U	1		EPA 410.4	14-Oct-99 1350	BS
Nitrogen, Nitrate plus Nitrite	4.06	mg/l		0.05		EPA 353.2	12-Oct-99 1716	BAS
Total Cyanide	< 0.005	mg/l	U	0.005		EPA 335.3	13-Oct-99 1330	ND
Antimony, Dissolved	< 0.05	mg/l	U	0.05		EPA 200.7	13-Oct-99 1555	RLH
Arsenic, Dissolved	< 0.005	mg/l	U	0.005		EPA 200.8	15-Oct-99 1521	LAB
Barium, Dissolved	< 0.1	mg/l	U	0.1		EPA 200.7	13-Oct-99 1555	RLH
Beryllium, Dissolved	< 0.001	mg/l	U	0.001		EPA 200.7	13-Oct-99 1555	RLH
Cadmium, Dissolved	< 0.001	mg/l	U	0.001		EPA 200.8	15-Oct-99 1521	LAB
Chromium, Dissolved	< 0.01	mg/l	U	0.01		EPA 200.7	13-Oct-99 1555	RLH
Cobalt, Dissolved	< 0.01	mg/l	U	0.01		EPA 200.7	13-Oct-99 1555	RLH
Copper, Dissolved	< 0.01	mg/l	U	0.01		EPA 200.7	13-Oct-99 1555	RLH
Iron, Dissolved	< 0.03	mg/l	U	0.03		EPA 200.7	13-Oct-99 1555	RLH
Lead, Dissolved	< 0.01	mg/l	U	0.01		EPA 200.8	15-Oct-99 1521	LAB
Mercury, Dissolved	< 0.001	mg/l	U	0.001		EPA 200.8	15-Oct-99 1521	LAB
Nickel, Dissolved	< 0.01	mg/l	U	0.01		EPA 200.8	15-Oct-99 1521	LAB
Selenium, Dissolved	0.017	mg/l		0.005		EPA 200.8	15-Oct-99 1521	LAB
Silver, Dissolved	< 0.005	mg/l	U	0.005		EPA 200.8	15-Oct-99 1521	LAB
Thallium, Dissolved	< 0.1	mg/l	U	0.1		EPA 200.8	15-Oct-99 1521	LAB
Vanadium, Dissolved	< 0.1	mg/l	U	0.1		EPA 200.7	13-Oct-99 1555	RLH
Zinc, Dissolved	0.04	mg/l		0.01		EPA 200.7	13-Oct-99 1555	RLH

U = Indicates parameter was analyzed for but not detected.



ENERGY LABORATORIES, INC.

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FAX (406) 252-6069 • 1-800-735-4489 • E-MAIL eli@energylab.comClient: Damschen-Entranco
Date Sampled: 06-OCT-99 10:45
Date Received: 12-OCT-99
Analysis Date: 15-OCT-1999 23:17
Project Info: SANITATION INC
Sample Info: SIMW-1Lab No.: 001-99-57909
Report Date: 10/18/99 10:35
Extraction Method: EPA 5030
Sample Matrix: WATER; pH= < 2

EPA METHOD 8260B: VOLATILE ORGANICS ANALYSIS REPORT

CONCENTRATION UNITS = ug/L (ppb)			
COMPOUNDS	CAS NO.	RESULT	QUALIFIER
Acetone	67-64-1	<20	U
Acrylonitrile	107-13-1	<20	U
Benzene	71-43-2	<1.0	U
Bromochloromethane	74-97-5	<1.0	U
Bromodichloromethane	75-27-4	<1.0	U
Bromoform	75-25-2	<1.0	U
Bromomethane	74-83-9	<1.0	U
Carbon disulfide	75-15-0	17	
Carbon tetrachloride	56-23-5	<1.0	U
Chlorobenzene	108-90-7	<1.0	U
Chloroethane	75-00-3	<1.0	U
Chloroform	67-66-3	<1.0	U
Chloromethane	74-87-3	<1.0	U
Chlorodibromomethane	124-48-1	<1.0	U
1,2-Dibromo-3-chloropropane	96-12-8	<1.0	U
1,2-Dibromoethane	106-93-4	<1.0	U
Dibromomethane	74-95-3	<1.0	U
1,2-Dichlorobenzene	95-50-1	<1.0	U
1,4-Dichlorobenzene	106-46-7	<1.0	U
trans-1,4-Dichloro-2-butene	110-57-6	<2.0	U
Dichlorodifluoromethane	75-71-8	<1.0	0.54J
1,1-Dichloroethane	75-34-3	<1.0	U
1,2-Dichloroethane	107-06-2	<1.0	U
1,1-Dichloroethene	75-35-4	<1.0	U
cis-1,2-Dichloroethene	156-59-2	<1.0	U
trans-1,2-Dichloroethene	156-60-5	<1.0	U
1,2-Dichloropropane	78-87-5	<1.0	U
cis-1,3-Dichloropropene	10061-01-5	<1.0	U
trans-1,3-Dichloropropene	10061-02-6	<1.0	U
Ethylbenzene	100-41-4	<1.0	U
2-Hexanone	591-78-6	<20	U
Iodomethane	74-88-4	<1.0	U
Methyl isobutyl ketone	108-10-1	<20	U
Methylene chloride	75-09-2	<1.0	U
Methyl ethyl ketone	78-93-3	<20	U
Styrene	100-42-5	<1.0	U
1,1,1,2-Tetrachloroethane	630-20-6	<1.0	U
1,1,2,2-Tetrachloroethane	79-34-5	<1.0	U
Tetrachloroethene	127-18-4	<1.0	U
Toluene	108-88-3	<1.0	U
1,1,1-Trichloroethane	71-55-6	<1.0	U
1,1,2-Trichloroethane	79-00-5	<1.0	U
Trichloroethene	79-01-6	<1.0	U
Trichlorofluoromethane	75-69-4	<1.0	U
1,2,3-Trichloropropane	96-18-4	<1.0	U
Vinyl acetate	108-05-4	<1.0	U
Vinyl chloride	75-01-4	<1.0	U
m+p-Xylenes	108383/106423	<1.0	U
o-Xylene	95-47-6	<1.0	U

SURROGATE RECOVERY REPORT

Surrogate Compound	Added-ug/L	Measured-ug/L	%Rec	QC Limits
1,2-Dichloroethane d4	10.0	9.06	91	80--120
Toluene d8	10.0	10.4	104	80--120
p-Bromofluorobenzene	10.0	10.1	101	80--120

QUALIFIER CODE EXPLANATIONS AND NOTES:

U= Indicates compound was analyzed for but not detected.

J= Estimated value. Present, but less than the limit of quantitation.

REPORT COMMENTS: None

Analyst:  Reviewing Supervisor: 

/IONTRAP1.i/vb101599.b/20oct15.d

**ENERGY LABORATORIES, INC.**P.O. BOX 30916 • 1120 SOUTH 27TH STREET • BILLINGS, MT 59107-0916 • PHONE (406) 252-6325
FAX (406) 252-6069 • 1-800-735-4489 • E-MAIL eli@energylab.com**LABORATORY ANALYSIS REPORT****Damschen-Entranco
Bruce Siegmund
PO Box 4817
Helena, MT 59604****Project ID: SANITATION INC
Sample ID: SIMW-2
Laboratory ID: 99-57909-2
Sample Matrix: Water
Sample Date: 06-Oct-99 1130
Received at lab: 12-Oct-99****Reported: 19-Oct-99**

	Results	Units	Qual	Reporting	Method	Analyzed	
				Limit			
Chloride	50	mg/l		1	EPA 300.0	13-Oct-99 1238	RLH
Sulfate	193	mg/l		1	EPA 300.0	13-Oct-99 1238	RLH
Specific Conductance @ 25 C	1100	umhos/cm		1	EPA 120.1	12-Oct-99 1506	QED
pH	7.0	s.u.		0.1	EPA 150.1	12-Oct-99 1506	QED
Chemical Oxygen Demand	2	mg/l		1	EPA 410.4	14-Oct-99 1350	BS
Nitrogen, Nitrate plus Nitrite	2.46	mg/l		0.05	EPA 353.2	12-Oct-99 1717	BAS
Total Cyanide	<0.005	mg/l	U	0.005	EPA 335.3	13-Oct-99 1330	ND
Antimony, Dissolved	<0.05	mg/l	U	0.05	EPA 200.7	13-Oct-99 1602	RLH
Arsenic, Dissolved	<0.005	mg/l	U	0.005	EPA 200.8	15-Oct-99 1552	LAB
Barium, Dissolved	<0.1	mg/l	U	0.1	EPA 200.7	13-Oct-99 1602	RLH
Beryllium, Dissolved	<0.001	mg/l	U	0.001	EPA 200.7	13-Oct-99 1602	RLH
Cadmium, Dissolved	<0.001	mg/l	U	0.001	EPA 200.8	15-Oct-99 1552	LAB
Chromium, Dissolved	<0.01	mg/l	U	0.01	EPA 200.7	13-Oct-99 1602	RLH
Cobalt, Dissolved	<0.01	mg/l	U	0.01	EPA 200.7	13-Oct-99 1602	RLH
Copper, Dissolved	<0.01	mg/l	U	0.01	EPA 200.7	13-Oct-99 1602	RLH
Iron, Dissolved	<0.03	mg/l	U	0.03	EPA 200.7	13-Oct-99 1602	RLH
Lead, Dissolved	<0.01	mg/l	U	0.01	EPA 200.8	15-Oct-99 1552	LAB
Mercury, Dissolved	<0.001	mg/l	U	0.001	EPA 200.8	15-Oct-99 1552	LAB
Nickel, Dissolved	<0.01	mg/l	U	0.01	EPA 200.8	15-Oct-99 1552	LAB
Selenium, Dissolved	0.006	mg/l		0.005	EPA 200.8	15-Oct-99 1552	LAB
Silver, Dissolved	<0.005	mg/l	U	0.005	EPA 200.8	15-Oct-99 1552	LAB
Thallium, Dissolved	<0.1	mg/l	U	0.1	EPA 200.8	15-Oct-99 1552	LAB
Vanadium, Dissolved	<0.1	mg/l	U	0.1	EPA 200.7	13-Oct-99 1602	RLH
Zinc, Dissolved	0.08	mg/l		0.01	EPA 200.7	13-Oct-99 1602	RLH

U = Indicates parameter was analyzed for but not detected.



ENERGY LABORATORIES, INC.

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FAX (406) 252-6069 • 1-800-735-4489 • E-MAIL eli@energylab.comClient: Damschen-Entranco
Date Sampled: 06-OCT-99 11:30
Date Received: 12-OCT-99
Analysis Date: 18-OCT-1999 14:37
Project Info: SANITATION INC
Sample Info: SIMW-2Lab No.: 002-99-57909
Report Date: 10/19/99 10:15
Extraction Method: EPA 5030
Sample Matrix: WATER; pH= < 2

EPA METHOD 8260B: VOLATILE ORGANICS ANALYSIS REPORT

CONCENTRATION UNITS = ug/L (ppb)			
COMPOUNDS	CAS NO.	RESULT	QUALIFIER
Acetone	67-64-1	<20	U
Acrylonitrile	107-13-1	<20	U
Benzene	71-43-2	<1.0	U
Bromochloromethane	74-97-5	<1.0	U
Bromodichloromethane	75-27-4	<1.0	U
Bromoform	75-25-2	<1.0	U
Bromomethane	74-83-9	<1.0	U
Carbon disulfide	75-15-0	<1.0	U
Carbon tetrachloride	56-23-5	<1.0	U
Chlorobenzene	108-90-7	<1.0	U
Chloroethane	75-00-3	<1.0	U
Chloroform	67-66-3	<1.0	U
Chloromethane	74-87-3	<1.0	U
Chlorodibromomethane	124-48-1	<1.0	U
1,2-Dibromo-3-chloropropane	96-12-8	<1.0	U
1,2-Dibromoethane	106-93-4	<1.0	U
Dibromomethane	74-95-3	<1.0	U
1,2-Dichlorobenzene	95-50-1	<1.0	U
1,4-Dichlorobenzene	106-46-7	<1.0	U
trans-1,4-Dichloro-2-butene	110-57-6	<2.0	U
Dichlorodifluoromethane	75-71-8	<1.0	U
1,1-Dichloroethane	75-34-3	<1.0	U
1,2-Dichloroethane	107-06-2	<1.0	U
1,1-Dichloroethene	75-35-4	<1.0	U
cis-1,2-Dichloroethene	156-59-2	<1.0	U
trans-1,2-Dichloroethene	156-60-5	<1.0	U
1,2-Dichloropropane	78-87-5	<1.0	U
cis-1,3-Dichloropropene	10061-01-5	<1.0	U
trans-1,3-Dichloropropene	10061-02-6	<1.0	U
Ethylbenzene	100-41-4	<1.0	U
2-Hexanone	591-78-6	<20	U
Iodomethane	74-88-4	<1.0	U
Methyl isobutyl ketone	108-10-1	<20	U
Methylene chloride	75-09-2	<1.0	U
Methyl ethyl ketone	78-93-3	<20	U
Styrene	100-42-5	<1.0	U
1,1,1,2-Tetrachloroethane	630-20-6	<1.0	U
1,1,2,2-Tetrachloroethane	79-34-5	<1.0	U
Tetrachloroethene	127-18-4	<1.0	U
Toluene	108-88-3	<1.0	U
1,1,1-Trichloroethane	71-55-6	<1.0	U
1,1,2-Trichloroethane	79-00-5	<1.0	U
Trichloroethene	79-01-6	<1.0	U
Trichlorofluoromethane	75-69-4	<1.0	U
1,2,3-Trichloropropane	96-18-4	<1.0	U
Vinyl acetate	108-05-4	<1.0	U
Vinyl chloride	75-01-4	<1.0	U
m+p-Xylenes	108383/106423	<1.0	U
o-Xylene	95-47-6	<1.0	U

SURROGATE RECOVERY REPORT

Surrogate Compound	Added-ug/L	Measured-ug/L	%Rec	QC Limits
1,2-Dichloroethane d4	10.0	9.06	91	80--120
Toluene d8	10.0	10.4	104	80--120
p-Bromofluorobenzene	10.0	10.8	108	80--120

QUALIFIER CODE EXPLANATIONS AND NOTES:

U= Indicates compound was analyzed for but not detected.

REPORT COMMENTS: None

Analyst: Reviewing Supervisor:

/IONTRAP1.1/vb101899.b/09oct18.d

LABORATORY ANALYSIS REPORT

Damschen-Entranco
Bruce Siegmund
PO Box 4817
Helena, MT 59604

Project ID: SANITATION INC
Sample ID: SIMW-3
Laboratory ID: 99-57909-3
Sample Matrix: Water
Sample Date: 06-Oct-99 0930
Received at lab: 12-Oct-99

Reported: 19-Oct-99

	Results	Units	Qual	Reporting	Method	Analyzed	
				Limit			
Chloride	27	mg/l		1	EPA 300.0	13-Oct-99 1253	RLH
Sulfate	124	mg/l		1	EPA 300.0	13-Oct-99 1253	RLH
Specific Conductance @ 25 C	744	umhos/cm		1	EPA 120.1	12-Oct-99 1507	QED
pH	7.3	s.u.		0.1	EPA 150.1	12-Oct-99 1507	QED
Chemical Oxygen Demand	<1	mg/l	U	1	EPA 410.4	14-Oct-99 1350	BS
Nitrogen, Nitrate plus Nitrite	11.5	mg/l		0.05	EPA 353.2	12-Oct-99 1719	BAS
Total Cyanide	<0.005	mg/l	U	0.005	EPA 335.3	13-Oct-99 1330	ND
Antimony, Dissolved	<0.05	mg/l	U	0.05	EPA 200.7	13-Oct-99 1604	RLH
Arsenic, Dissolved	<0.005	mg/l	U	0.005	EPA 200.8	15-Oct-99 1608	LAB
Barium, Dissolved	<0.1	mg/l	U	0.1	EPA 200.7	13-Oct-99 1604	RLH
Beryllium, Dissolved	<0.001	mg/l	U	0.001	EPA 200.7	13-Oct-99 1604	RLH
Cadmium, Dissolved	<0.001	mg/l	U	0.001	EPA 200.8	15-Oct-99 1608	LAB
Chromium, Dissolved	<0.01	mg/l	U	0.01	EPA 200.7	13-Oct-99 1604	RLH
Cobalt, Dissolved	<0.01	mg/l	U	0.01	EPA 200.7	13-Oct-99 1604	RLH
Copper, Dissolved	<0.01	mg/l	U	0.01	EPA 200.7	13-Oct-99 1604	RLH
Iron, Dissolved	<0.03	mg/l	U	0.03	EPA 200.7	13-Oct-99 1604	RLH
Lead, Dissolved	<0.01	mg/l	U	0.01	EPA 200.8	15-Oct-99 1608	LAB
Mercury, Dissolved	<0.001	mg/l	U	0.001	EPA 200.8	15-Oct-99 1608	LAB
Nickel, Dissolved	<0.01	mg/l	U	0.01	EPA 200.8	15-Oct-99 1608	LAB
Selenium, Dissolved	0.019	mg/l		0.005	EPA 200.8	15-Oct-99 1608	LAB
Silver, Dissolved	<0.005	mg/l	U	0.005	EPA 200.8	15-Oct-99 1608	LAB
Thallium, Dissolved	<0.1	mg/l	U	0.1	EPA 200.7	13-Oct-99 1604	RLH
Vanadium, Dissolved	<0.1	mg/l	U	0.1	EPA 200.7	13-Oct-99 1604	RLH
Zinc, Dissolved	0.02	mg/l		0.01	EPA 200.7	13-Oct-99 1604	RLH

U = Indicates parameter was analyzed for but not detected.



ENERGY LABORATORIES, INC.

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FAX (406) 252-6069 • 1-800-735-4489 • E-MAIL eli@energylab.comClient: Damschen-Entranco
Date Sampled: 06-OCT-99 09:30
Date Received: 12-OCT-99
Analysis Date: 18-OCT-1999 16:38
Project Info: SANITATION INC
Sample Info: SIMW-3Lab No.: 003-99-57909
Report Date: 10/19/99 10:31
Extraction Method: EPA 5030
Sample Matrix: WATER; pH= < 2

EPA METHOD 8260B: VOLATILE ORGANICS ANALYSIS REPORT

CONCENTRATION UNITS = ug/L (ppb)			
COMPOUNDS	CAS NO.	RESULT	QUALIFIER
Acetone	67-64-1	<20	U
Acrylonitrile	107-13-1	<20	U
Benzene	71-43-2	<1.0	U
Bromochloromethane	74-97-5	<1.0	U
Bromodichloromethane	75-27-4	<1.0	U
Bromoform	75-25-2	<1.0	U
Bromomethane	74-83-9	<1.0	U
× Carbon disulfide	75-15-0	1.9	
Carbon tetrachloride	56-23-5	<1.0	U
Chlorobenzene	108-90-7	<1.0	U
Chloroethane	75-00-3	<1.0	U
Chloroform	67-66-3	<1.0	U
Chloromethane	74-87-3	<1.0	U
Chlorodibromomethane	124-48-1	<1.0	U
1,2-Dibromo-3-chloropropane	96-12-8	<1.0	U
1,2-Dibromoethane	106-93-4	<1.0	U
Dibromomethane	74-95-3	<1.0	U
1,2-Dichlorobenzene	95-50-1	<1.0	U
1,4-Dichlorobenzene	106-46-7	<1.0	U
trans-1,4-Dichloro-2-butene	110-57-6	<2.0	U
Dichlorodifluoromethane	75-71-8	<1.0	U
1,1-Dichloroethane	75-34-3	<1.0	U
1,2-Dichloroethane	107-06-2	<1.0	U
1,1-Dichloroethene	75-35-4	<1.0	U
cis-1,2-Dichloroethene	156-59-2	<1.0	U
trans-1,2-Dichloroethene	156-60-5	<1.0	U
1,2-Dichloropropane	78-87-5	<1.0	U
cis-1,3-Dichloropropene	10061-01-5	<1.0	U
trans-1,3-Dichloropropene	10061-02-6	<1.0	U
Ethylbenzene	100-41-4	<1.0	U
2-Hexanone	591-78-6	<20	U
Iodomethane	74-88-4	<1.0	U
Methyl isobutyl ketone	108-10-1	<20	U
Methylene chloride	75-09-2	<1.0	U
Methyl ethyl ketone	78-93-3	<20	U
Styrene	100-42-5	<1.0	U
1,1,1,2-Tetrachloroethane	630-20-6	<1.0	U
1,1,2,2-Tetrachloroethane	79-34-5	<1.0	U
Tetrachloroethene	127-18-4	<1.0	U
Toluene	108-88-3	<1.0	U
1,1,1-Trichloroethane	71-55-6	<1.0	U
1,1,2-Trichloroethane	79-00-5	<1.0	U
Trichloroethene	79-01-6	<1.0	U
Trichlorofluoromethane	75-69-4	<1.0	U
1,2,3-Trichloropropane	96-18-4	<1.0	U
Vinyl acetate	108-05-4	<1.0	U
Vinyl chloride	75-01-4	<1.0	U
m+p-Xylenes	108383/106423	<1.0	U
o-Xylene	95-47-6	<1.0	U

SURROGATE RECOVERY REPORT

Surrogate Compound	Added-ug/L	Measured-ug/L	%Rec	QC Limits
1,2-Dichloroethane d4	10.0	8.66	87	80--120
Toluene d8	10.0	10.5	105	80--120
p-Bromofluorobenzene	10.0	11.6	116	80--120

QUALIFIER CODE EXPLANATIONS AND NOTES:

U= Indicates compound was analyzed for but not detected.

REPORT COMMENTS: None

Analyst: MM Reviewing Supervisor: MM /IONTRAP1.i/vb101899.b/12oct18.d



ENERGY LABORATORIES, INC.

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FAX (406) 252-6069 • 1-800-735-4489 • E-MAIL eli@energylab.comClient: Damschen-Entranco
Date Sampled: 06-OCT-99 09:30
Date Received: 12-OCT-99
Analysis Date: 18-OCT-1999 12:36
Project Info: SANITATION INC
Sample Info: SIMW-3 DUPLab No.: 004-99-57909
Report Date: 10/19/99 10:22
Extraction Method: EPA 5030
Sample Matrix: WATER; pH= < 2EPA METHOD 8260B: VOLATILE ORGANICS ANALYSIS REPORT

CONCENTRATION UNITS = ug/L (ppb)			
COMPOUNDS	CAS NO.	RESULT	QUALIFIER
Acetone	67-64-1	<20	U
Acrylonitrile	107-13-1	<20	U
Benzene	71-43-2	<1.0	U
Bromochloromethane	74-97-5	<1.0	U
Bromodichloromethane	75-27-4	<1.0	U
Bromoform	75-25-2	<1.0	U
Bromomethane	74-83-9	<1.0	U
Carbon disulfide	75-15-0	1.7	
Carbon tetrachloride	56-23-5	<1.0	U
Chlorobenzene	108-90-7	<1.0	U
Chloroethane	75-00-3	<1.0	U
Chloroform	67-66-3	<1.0	U
Chloromethane	74-87-3	<1.0	U
Chlorodibromomethane	124-48-1	<1.0	U
1,2-Dibromo-3-chloropropane	96-12-8	<1.0	U
1,2-Dibromoethane	106-93-4	<1.0	U
Dibromomethane	74-95-3	<1.0	U
1,2-Dichlorobenzene	95-50-1	<1.0	U
1,4-Dichlorobenzene	106-46-7	<1.0	U
trans-1,4-Dichloro-2-butene	110-57-6	<2.0	U
Dichlorodifluoromethane	75-71-8	<1.0	U
1,1-Dichloroethane	75-34-3	<1.0	U
1,2-Dichloroethane	107-06-2	<1.0	U
1,1-Dichloroethene	75-35-4	<1.0	U
cis-1,2-Dichloroethene	156-59-2	<1.0	U
trans-1,2-Dichloroethene	156-60-5	<1.0	U
1,2-Dichloropropane	78-87-5	<1.0	U
cis-1,3-Dichloropropene	10061-01-5	<1.0	U
trans-1,3-Dichloropropene	10061-02-6	<1.0	U
Ethylbenzene	100-41-4	<1.0	U
2-Hexanone	591-78-6	<20	U
Iodomethane	74-88-4	<1.0	U
Methyl isobutyl ketone	108-10-1	<20	U
Methylene chloride	75-09-2	<1.0	U
Methyl ethyl ketone	78-93-3	<20	U
Styrene	100-42-5	<1.0	U
1,1,1,2-Tetrachloroethane	630-20-6	<1.0	U
1,1,2,2-Tetrachloroethane	79-34-5	<1.0	U
Tetrachloroethene	127-18-4	<1.0	U
Toluene	108-88-3	<1.0	U
1,1,1-Trichloroethane	71-55-6	<1.0	U
1,1,2-Trichloroethane	79-00-5	<1.0	U
Trichloroethene	79-01-6	<1.0	U
Trichlorofluoromethane	75-69-4	<1.0	U
1,2,3-Trichloropropane	96-18-4	<1.0	U
Vinyl acetate	108-05-4	<1.0	U
Vinyl chloride	75-01-4	<1.0	U
m+p-Xylenes	108383/106423	<1.0	U
o-Xylene	95-47-6	<1.0	U

SURROGATE RECOVERY REPORT

Surrogate Compound	Added-ug/L	Measured-ug/L	%Rec	QC Limits
1,2-Dichloroethane d4	10.0	8.68	87	80--120
Toluene d8	10.0	10.5	105	80--120
p-Bromofluorobenzene	10.0	10.6	106	80--120

QUALIFIER CODE EXPLANATIONS AND NOTES:

U= Indicates compound was analyzed for but not detected.

REPORT COMMENTS: None

Analyst: VPReviewing Supervisor: moj

/IONTRAP1.i/vb101899.b/06oct18.d



ENERGY LABORATORIES, INC.

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FAX (406) 252-6069 • 1-800-735-4489 • E-MAIL eli@energylab.comClient: Damschen-Entranco
Date Sampled:
Date Received: 12-OCT-99
Analysis Date: 18-OCT-1999 13:17
Project Info:
Sample Info: TRIP BLANKLab No.: 005-99-57909
Report Date: 10/19/99 10:23
Extraction Method: EPA 5030
Sample Matrix: WATER; pH= < 2

EPA METHOD 8260B: VOLATILE ORGANICS ANALYSIS REPORT

CONCENTRATION UNITS = ug/L (ppb)			
COMPOUNDS	CAS NO.	RESULT	QUALIFIER
Acetone	67-64-1	<20	U
Acrylonitrile	107-13-1	<20	U
Benzene	71-43-2	<1.0	U
Bromochloromethane	74-97-5	<1.0	U
Bromodichloromethane	75-27-4	<1.0	U
Bromoform	75-25-2	<1.0	U
Bromomethane	74-83-9	<1.0	U
Carbon disulfide	75-15-0	<1.0	U
Carbon tetrachloride	56-23-5	<1.0	U
Chlorobenzene	108-90-7	<1.0	U
Chloroethane	75-00-3	<1.0	U
Chloroform	67-66-3	<1.0	U
Chloromethane	74-87-3	<1.0	U
Chlorodibromomethane	124-48-1	<1.0	U
1,2-Dibromo-3-chloropropane	96-12-8	<1.0	U
1,2-Dibromoethane	106-93-4	<1.0	U
Dibromomethane	74-95-3	<1.0	U
1,2-Dichlorobenzene	95-50-1	<1.0	U
1,4-Dichlorobenzene	106-46-7	<1.0	U
trans-1,4-Dichloro-2-butene	110-57-6	<2.0	U
Dichlorodifluoromethane	75-71-8	<1.0	U
1,1-Dichloroethane	75-34-3	<1.0	U
1,2-Dichloroethane	107-06-2	<1.0	U
1,1-Dichloroethene	75-35-4	<1.0	U
cis-1,2-Dichloroethene	156-59-2	<1.0	U
trans-1,2-Dichloroethene	156-60-5	<1.0	U
1,2-Dichloropropane	78-87-5	<1.0	U
cis-1,3-Dichloropropene	10061-01-5	<1.0	U
trans-1,3-Dichloropropene	10061-02-6	<1.0	U
Ethylbenzene	100-41-4	<1.0	U
2-Hexanone	591-78-6	<20	U
Iodomethane	74-88-4	<1.0	U
Methyl isobutyl ketone	108-10-1	<20	U
Methylene chloride	75-09-2	<1.0	U
Methyl ethyl ketone	78-93-3	<20	U
Styrene	100-42-5	<1.0	U
1,1,1,2-Tetrachloroethane	630-20-6	<1.0	U
1,1,2,2-Tetrachloroethane	79-34-5	<1.0	U
Tetrachloroethene	127-18-4	<1.0	U
Toluene	108-88-3	<1.0	U
1,1,1-Trichloroethane	71-55-6	<1.0	U
1,1,2-Trichloroethane	79-00-5	<1.0	U
Trichloroethene	79-01-6	<1.0	U
Trichlorofluoromethane	75-69-4	<1.0	U
1,2,3-Trichloropropane	96-18-4	<1.0	U
Vinyl acetate	108-05-4	<1.0	U
Vinyl chloride	75-01-4	<1.0	U
m+p-Xylenes	108383/106423	<1.0	U
o-Xylene	95-47-6	<1.0	U

SURROGATE RECOVERY REPORT

Surrogate Compound	Added-ug/L	Measured-ug/L	%Rec	QC Limits
1,2-Dichloroethane d4	10.0	9.50	95	80--120
Toluene d8	10.0	10.5	105	80--120
p-Bromofluorobenzene	10.0	10.6	106	80--120

QUALIFIER CODE EXPLANATIONS AND NOTES:

U= Indicates compound was analyzed for but not detected.

REPORT COMMENTS: None

Analyst: WJReviewing Supervisor: WJ

/IONTRAP1.i/vb101899.b/07oct18.d

Quality Control Sample: Laboratory Reagent Blank 18-OCT-1999 11:24

Report Date: 10/19/99 10:19

Extraction Method: EPA 5030

Sample Matrix: WATER

Remarks: This Laboratory Reagent Blank Quality Control Sample was extracted and analyzed with your set of samples to determine if method analytes or other interferences are present in the laboratory environment, the reagents, or the apparatus.

EPA METHOD 8260B: VOLATILE ORGANICS ANALYSIS REPORT

COMPOUNDS	CONCENTRATION UNITS = ug/L (ppb)		QUALIFIER
	CAS NO.	RESULT	
Acetone	67-64-1	<20	U
Acrylonitrile	107-13-1	<20	U
Benzene	71-43-2	<1.0	U
Bromochloromethane	74-97-5	<1.0	U
Bromodichloromethane	75-27-4	<1.0	U
Bromoform	75-25-2	<1.0	U
Bromomethane	74-83-9	<1.0	U
Carbon disulfide	75-15-0	<1.0	U
Carbon tetrachloride	56-23-5	<1.0	U
Chlorobenzene	108-90-7	<1.0	U
Chloroethane	75-00-3	<1.0	U
Chloroform	67-66-3	<1.0	U
Chloromethane	74-87-3	<1.0	U
Chlorodibromomethane	124-48-1	<1.0	U
1,2-Dibromo-3-chloropropane	96-12-8	<1.0	U
1,2-Dibromoethane	106-93-4	<1.0	U
Dibromomethane	74-95-3	<1.0	U
1,2-Dichlorobenzene	95-50-1	<1.0	U
1,4-Dichlorobenzene	106-46-7	<1.0	U
trans-1,4-Dichloro-2-butene	110-57-6	<2.0	U
Dichlorodifluoromethane	75-71-8	<1.0	U
1,1-Dichloroethane	75-34-3	<1.0	U
1,2-Dichloroethane	107-06-2	<1.0	U
1,1-Dichloroethene	75-35-4	<1.0	U
cis-1,2-Dichloroethene	156-59-2	<1.0	U
trans-1,2-Dichloroethene	156-60-5	<1.0	U
1,2-Dichloropropane	78-87-5	<1.0	U
cis-1,3-Dichloropropene	10061-01-5	<1.0	U
trans-1,3-Dichloropropene	10061-02-6	<1.0	U
Ethylbenzene	100-41-4	<1.0	U
2-Hexanone	591-78-6	<20	U
Iodomethane	74-88-4	<1.0	U
Methyl isobutyl ketone	108-10-1	<20	U
Methylene chloride	75-09-2	<1.0	U
Methyl ethyl ketone	78-93-3	<20	U
Styrene	100-42-5	<1.0	U
1,1,1,2-Tetrachloroethane	630-20-6	<1.0	U
1,1,2,2-Tetrachloroethane	79-34-5	<1.0	U
Tetrachloroethene	127-18-4	<1.0	U
Toluene	108-88-3	<1.0	U
1,1,1-Trichloroethane	71-55-6	<1.0	U
1,1,2-Trichloroethane	79-00-5	<1.0	U
Trichloroethene	79-01-6	<1.0	U
Trichlorofluoromethane	75-69-4	<1.0	U
1,2,3-Trichloropropane	96-18-4	<1.0	U
Vinyl acetate	108-05-4	<1.0	U
Vinyl chloride	75-01-4	<1.0	U
m+p-Xylenes	108383/106423	<1.0	U
o-Xylene	95-47-6	<1.0	U

SURROGATE RECOVERY REPORT

Surrogate Compound	Added-ug/L	Measured-ug/L	%Rec	QC Limits
1,2-Dichloroethane d4	10.0	8.87	89	80--120
Toluene d8	10.0	10.5	105	80--120
p-Bromofluorobenzene	10.0	10.3	103	80--120

QUALIFIER CODE EXPLANATIONS AND NOTES:

U= Indicates compound was analyzed for but not detected.

REPORT COMMENTS: None

Analyst: RAE Reviewing Supervisor: MB

/IONTRAP1.i/vb101899.b/04oct18.d

Quality Control Sample: Laboratory Reagent Blank 15-OCT-99 22:37

Report Date: 10/18/99 10:33

Extraction Method: EPA 5030

Sample Matrix: WATER

Remarks: This Laboratory Reagent Blank Quality Control Sample was extracted and analyzed with your set of samples to determine if method analytes or other interferences are present in the laboratory environment, the reagents, or the apparatus.

EPA METHOD 8260B: VOLATILE ORGANICS ANALYSIS REPORT

COMPOUNDS	CONCENTRATION UNITS = ug/L (ppb)		QUALIFIER
	CAS NO.	RESULT	
Acetone	67-64-1	<20	U
Acrylonitrile	107-13-1	<20	U
Benzene	71-43-2	<1.0	U
Bromochloromethane	74-97-5	<1.0	U
Bromodichloromethane	75-27-4	<1.0	U
Bromoform	75-25-2	<1.0	U
Bromomethane	74-83-9	<1.0	U
Carbon disulfide	75-15-0	<1.0	U
Carbon tetrachloride	56-23-5	<1.0	U
Chlorobenzene	108-90-7	<1.0	U
Chloroethane	75-00-3	<1.0	U
Chloroform	67-66-3	<1.0	U
Chloromethane	74-87-3	<1.0	U
Chlorodibromomethane	124-48-1	<1.0	U
1,2-Dibromo-3-chloropropane	96-12-8	<1.0	U
1,2-Dibromoethane	106-93-4	<1.0	U
Dibromomethane	74-95-3	<1.0	U
1,2-Dichlorobenzene	95-50-1	<1.0	U
1,4-Dichlorobenzene	106-46-7	<1.0	U
trans-1,4-Dichloro-2-butene	110-57-6	<2.0	U
Dichlorodifluoromethane	75-71-8	<1.0	U
1,1-Dichloroethane	75-34-3	<1.0	U
1,2-Dichloroethane	107-06-2	<1.0	U
1,1-Dichloroethene	75-35-4	<1.0	U
cis-1,2-Dichloroethene	156-59-2	<1.0	U
trans-1,2-Dichloroethene	156-60-5	<1.0	U
1,2-Dichloropropane	78-87-5	<1.0	U
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Methyl ethyl ketone	78-93-3	<20	U
Styrene	100-42-5	<1.0	U
1,1,1,2-Tetrachloroethane	630-20-6	<1.0	U
1,1,2,2-Tetrachloroethane	79-34-5	<1.0	U
Tetrachloroethene	127-18-4	<1.0	U
Toluene	108-88-3	<1.0	U
1,1,1-Trichloroethane	71-55-6	<1.0	U
1,1,2-Trichloroethane	79-00-5	<1.0	U
Trichloroethene	79-01-6	<1.0	U
Trichlorofluoromethane	75-69-4	<1.0	U
1,2,3-Trichloropropane	96-18-4	<1.0	U
Vinyl acetate	108-05-4	<1.0	U
Vinyl chloride	75-01-4	<1.0	U
m+p-Xylenes	108383/106423	<1.0	U
o-Xylene	95-47-6	<1.0	U

SURROGATE RECOVERY REPORT

Surrogate Compound	Added-ug/L	Measured-ug/L	%Rec	QC Limits
1,2-Dichloroethane d4	10.0	9.14	91	80--120
Toluene d8	10.0	10.6	106	80--120
p-Bromofluorobenzene	10.0	10.1	101	80--120

QUALIFIER CODE EXPLANATIONS AND NOTES:

U= Indicates compound was analyzed for but not detected.

REPORT COMMENTS: None

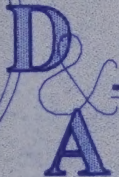
Analyst: MA Reviewing Supervisor: mm /IONTRAP1.i/vb101599.b/19oct15.d

PROJECT TITLE

SANITATION INC.
Newtown, Montana

TITLE

Site Plan



Damschen & Associates, Inc.

CONSULTING ENGINEERS

• 2030 11th Ave., Suite 11 •
• HELENA, MONTANA •

PROJECT NUMBER: 95-53

BY: B. LLOYD

PROJECT BY: B.DAMSCHEN

BY: B. SIEGMUND

AUGUST, 1996



11/8/99

12/29/98

DATE

BLS

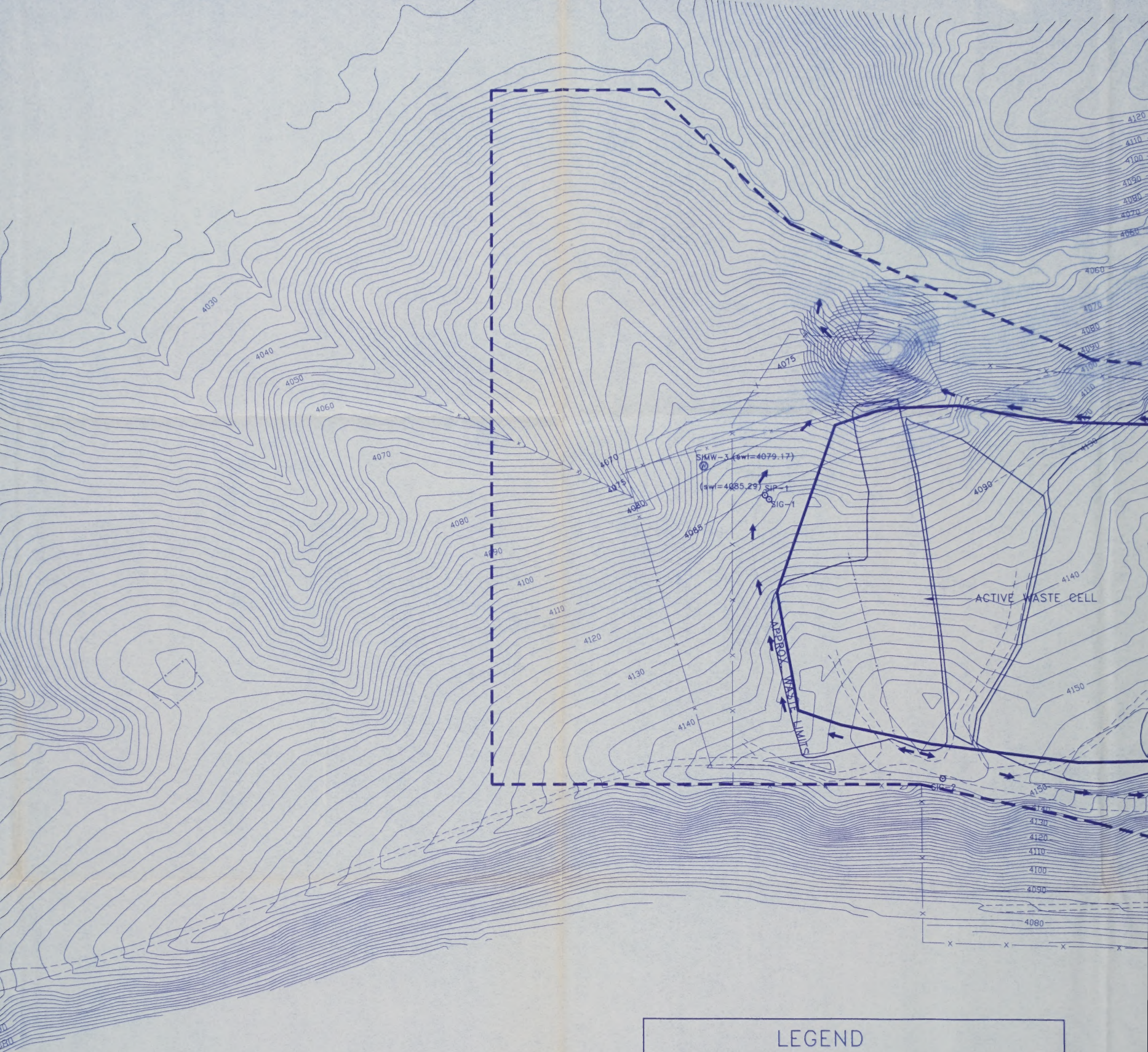
BLS

REVISION

SHEET NO.

1

of 1



LEGEND

- SI-1 test boring (plugged)
- ▲ SIG-1 landfill gas monitoring well
- ◻ SIP-1 piezometer, showing static water level elevation
(SWL=4100)
- ⊙ SIMW-1 ground-water monitoring well, showing static water level elevation.
(SWL=4100)
- water table contour; interval two feet
- contact of carbonaceous grey clay shale with overlying sandstone, siltstone and shale; dashed where obscured; dotted where uncertain
- topographic contour interval = 2 ft
- groundwater measurements from October 6, 1999.





DAMSCHE-ENTRANCO

RECEIVED

NOV 11 1999

MONTANA
DEPT. OF ENVIRONMENTAL QUALITY
COMMUNITY SERVICES BUREAU

November 9, 1999

PO BOX 4817

2030 11th AVENUE

SUITE 11

HELENA, MONTANA

59604

Pat Potts
Montana Department of Environmental Quality
P.O. Box 200901
Helena, MT 59620-0901

Dear Ms. Potts:

Enclosed please find the results of the Spring, 1999 ground-water monitoring event at the Sanitation, Inc. landfill in Lewistown, Montana. Sampling was undertaken on June 15, 1999.

TELEPHONE

406 449 8627

FAX

406 449 8631

Ground-Water Flow

The static water level in all wells were considerably higher than those measured in the Autumn of 1998. Recovery levels from bailing were very similar to those measured in the past, so it is assumed that there have been no significant changes in the saturated zone characteristics.

The hydraulic gradient varied from the eastern side of the site to the western side. The gradient is usually steeper on the western edge of the facility, and the last visit conformed with this trend. The hydraulic gradient (I) near SIMW-1 and -2 can be measured from the enclosed map to be about 0.043. The gradient near SIMW-3 and SIP-1 is about 0.12. Using the previously-accepted estimated porosity (n_e) of 0.35, the seepage velocity (V_s) and discharge (Q) can be calculated for the area around each of the wells. The hydraulic conductivity (K) for the area around SIMW-1 and -2 was measured at 2.6×10^{-2} cm/sec (75 ft/day). Using

$$V_s = KI/n_e$$

the seepage velocity for the area around SIMW-1 can be calculated as 3.25×10^{-3} cm/day (9.2 ft/day). The hydraulic conductivity around SIMW-3 was measured at 3.2×10^{-3} cm/sec (9.2 ft/day), with a resulting seepage velocity of 1.1×10^{-3} cm/sec (3.15 ft/day).

Discharge can be calculated employing these data along with a given area of discharge (A) using

ARIZONA

CALIFORNIA

IDAHO

MONTANA

NEW MEXICO

OREGON

UTAH

WASHINGTON



LEGEND

- SI-1 test boring (plugged)
- SIG-1 landfill gas monitoring well
- SIP-1 piezometer, showing static water level elevation
- SIMW-1 ground-water monitoring well, showing static water level elevation.
- water table contour; interval two feet
- contact of carbonaceous grey clay shale with overlying sandstone, siltstone and shale; dashed where obscured; dotted where uncertain
- geographic contour interval = 2 ft
- groundwater measurements from October 6, 1999.

PROJECT TITLE
SANITATION INC.
 Lewistown, Montana
 SHEET TITLE
Site Plan



D & A

Damschen & Associates, Inc.
 CONSULTING ENGINEERS
 2030 11th Ave., Suite 11
 HELENA, MONTANA

JOB/ACAD NUMBER:	95-53			SHEET NO.
DRAWN BY:	B. LLOYD			1
APPROVED BY:	B. DAMSCHEN	10/8/99	BLS	of 1
CHECKED BY:	B. SIEGMUND	10/29/99	BLS	
DATE:	AUGUST, 1996	#	DATE	REVISION



DAMSCHEN-ENTRANCO

RECEIVED

NOV 11 1999

MONTANA
DEPT. OF ENVIRONMENTAL QUALITY
COMMUNITY SERVICES BUREAU

November 9, 1999

PO BOX 4817

2030 11th AVENUE

SUITE 11

HELENA, MONTANA

59604

Pat Potts
Montana Department of Environmental Quality
P.O. Box 200901
Helena, MT 59620-0901

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TELEPHONE

406 449 8627

FAX

406 449 8631

Ground-Water Flow

The static water level in all wells were considerably higher than those measured in the Autumn of 1998. Recovery levels from bailing were very similar to those measured in the past, so it is assumed that there have been no significant changes in the saturated zone characteristics.

The hydraulic gradient varied from the eastern side of the site to the western side. The gradient is usually steeper on the western edge of the facility, and the last visit conformed with this trend. The hydraulic gradient (I) near SIMW-1 and -2 can be measured from the enclosed map to be about 0.043. The gradient near SIMW-3 and SIP-1 is about 0.12. Using the previously-accepted estimated porosity (n_e) of 0.35, the seepage velocity (V_s) and discharge (Q) can be calculated for the area around each of the wells. The hydraulic conductivity (K) for the area around SIMW-1 and -2 was measured at 2.6×10^{-2} cm/sec (75 ft/day). Using

ARIZONA

CALIFORNIA

IDAHO

MONTANA

NEW MEXICO

OREGON

UTAH

WASHINGTON

$$V_s = KI/n_e$$

the seepage velocity for the area around SIMW-1 can be calculated as 3.25×10^{-3} cm/day (9.2 ft/day). The hydraulic conductivity around SIMW-3 was measured at 3.2×10^{-3} cm/sec (9.2 ft/day), with a resulting seepage velocity of 1.1×10^{-3} cm/sec (3.15 ft/day).

Discharge can be calculated employing these data along with a given area of discharge (A) using

$$Q = KIA.$$

Assuming an average saturated zone thickness of about 3 feet in the area of SIMW-1 and -2 and a discharge width of 600 feet, the discharge becomes 164 cubic meters per day (m^3/day) or 5,800 cubic feet per day (ft^3/day). Using a similar saturated zone thickness and a value of 300 feet for the discharge width, the discharge for the area around SIMW-3 can be calculated at 34 m^3/day , or 1,210 ft^3/day . This only accounts for 900 feet of the approximately 1,600 of width presumed to be transmitting ground water. The two areas produce between 5 and 10 cubic feet of water per day for each foot of saturated zone width. Assuming a median value of 7.5 cubic feet per day discharge through the remaining 700 feet, one can estimate that there is a total of approximately 350 m^3/day (12,360 ft^3/day) passing through the saturated zone.

Ground-Water Quality

The volatile organic compounds (VOCs) found previously at the site were present again in roughly the same concentrations in the samples taken for the Spring event. Using either ANOVA or intra-well prediction interval analysis, no exceedences were noted.

A very curious occurrence was noted, however, in monitoring well SIMW-3. Ten metals never previously observed at the facility appeared in quantities well above the detection limit, in some cases two orders of magnitude above the practical quantitation limit. The metals detected in this sample were:

- arsenic, 0.011 milligrams per liter (mg/l);
- barium, 0.3 mg/l ;
- beryllium, 0.002 mg/l ;
- cadmium, 0.003 mg/l ;
- chromium, 0.07 mg/l ;
- cobalt, 0.09 mg/l ;
- copper, 0.07 mg/l ;
- iron, 12.9 mg/l ;
- lead, 0.12 mg/l ;
- nickel, 0.11 mg/l ;
- selenium, 0.074;
- vanadium, 0.1, and;
- zinc, 0.47 mg/l .

Some of these values are exceedingly high, such as the iron and zinc, considering the previous data. What is remarkable about these results is that there is no associated change in pH, specific conductance, or any other indicator parameter that might lead to the conclusion that leachate was entering the ground water. Only metals seem to have been affected by whatever event occurred. What is more remarkable yet is that the facility was recently sampled again, and the results, which arrived less than a week ago, show no evidence of the excess metals at all. The only metal detected in the results from



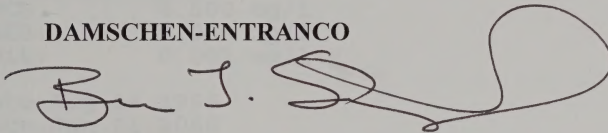
this autumn's sampling was zinc in a concentration of 0.02 mg/l, which is normal for the groundwater at this site.

This is an extraordinary event, from the point of a ground-water quality. There is not a good explanation for what appears to be a slug of metals moving through the ground water. We assume that the well has been locked continuously, but we cannot confirm that.

In spite of this unusual occurrence, we do not recommend any change in the sampling regime at the Sanitation, Inc. landfill. If you have any questions or require any additional information, please do not hesitate to contact us.

Sincerely,

DAMSCHEN-ENTRANCO



Bruce L. Siegmund
Project Hydrogeologist

Enclosures

CC: William Spoya

Facility:D&A160 Sanitation, Inc.

Address:P.O. Box 882

City:Lewistown ST:MT Zip:59457
 County:FERGUS

Contact:Bill Spoya
 Phone:() -

Permit Type:Detection

Constituent:Chld dis Chloride, dissolved

CAS Number:16887-00-6

MCL: 0.000 mg/l

ACL: 0.000 mg/l

Detect Limit: 0.001 mg/l

Start Date:Aug 16 1995

End Date:Jan 01 2000

Data Mode:Original

Background Wells

Well ID	N	%ND	Max Value	Min Value	Mean	Std Dev
SIMW-1	5	0	26.00	23.00	24.40	1.14
SIP-2	1	0	28.00	28.00	28.00	0.00

Compliance Wells

Well ID	N	%ND	Max Value	Min Value	Mean	Std Dev
SIMW-2	10	0	63.00	30.00	53.70	9.59
SIMW-3	9	0	34.00	23.00	28.67	3.94

Well ID	Date	Observation	Rank
SIMW-1	08/16/95	26.0000	8.0
SIMW-1	06/03/97	25.0000	6.0
SIMW-1	11/04/97	24.0000	3.5
SIMW-1	06/15/99	23.0000	1.5
SIMW-1	06/15/99	24.0000	3.5
SIP-2	11/26/96	28.0000	10.0

áááááááááááá

Background Rank Sum: 32.5

Background Rank Avg: 5.4

SIMW-2	08/16/95	55.0000	19.0
SIMW-2	06/10/96	47.0000	17.0
SIMW-2	10/22/96	62.0000	24.0
SIMW-2	06/03/97	63.0000	25.0
SIMW-2	11/04/97	58.0000	22.0
SIMW-2	06/16/98	56.0000	20.5
SIMW-2	06/16/98	59.0000	23.0
SIMW-2	10/06/98	56.0000	20.5

SIMW-2 10/06/98 51.000 18.0
SIMW-2 06/15/99 30.0000 12.5
Compliance Well Rank Sum: 201.5
Compliance Well Rank Avg: 20.1
SIMW-3 08/16/95 34.0000 15.5
SIMW-3 06/10/96 30.0000 12.5
SIMW-3 10/22/96 34.0000 15.5
SIMW-3 06/03/97 27.0000 9.0
SIMW-3 11/04/97 30.0000 12.5
SIMW-3 11/04/97 30.0000 12.5
SIMW-3 06/16/98 23.0000 1.5
SIMW-3 10/06/98 25.0000 6.0
SIMW-3 06/15/99 25.0000 6.0
Compliance Well Rank Sum: 91.0
Compliance Well Rank Avg: 10.1

H Statistic: 17.1947
H Adjusted for Ties: 17.3145
Degrees of Freedom: 2
Chi-Squared: 5.9915
Z²/DF: 1.9600

* Indicates significant evidence of contamination

Well ID	Crit. Diff.	Rank Avg.	Background Rank Avg.	Difference
*SIMW-2	7.4375	20.15	5.42	14.73
SIMW-3	7.5909	10.11	5.42	4.69

Prediction Intervals
Report Printed: 11-09-1999 16:18

Facility:D&A160 Sanitation, Inc.
Address:P.O. Box 882
City:Lewistown ST:MT Zip:59457
County:FERGUS
Contact:Bill Spoya
Phone:() -

Permit Type:Detection

Constituent:Chld dis Chloride, dissolved

CAS Number:16887-00-6
MCL: 0.000 mg/l
ACL: 0.000 mg/l
Detect Limit: 0.001 mg/l

Start Date:Aug 16 1995
End Date:Jan 01 2000

Data Mode:Original

Background Data

Well ID	Date	Observation
---------	------	-------------

1% Critical Value: 0.764
5% Critical Value: 0.829

Future Data

Well:SIMW-2

Date	Observation
06/15/99	30000.0000

Summary Statistics

Observations: 1
Mean: 56333.332
Std Dev: 5049.752

Prediction Intervals

Significance Level:0.050000

Date Range	Observations	Mean	Interval
06/15/99-06/30/99	1	30000.000	[0.0- 66231.531]

* Since the Mean for this period exceeds the upper prediction limit,
there is significant evidence of contamination.

Kruskal-Wallace Test

Report Printed: 11-09-1999 16:19

Facility:D&A160 Sanitation, Inc.

Address:P.O. Box 882

City:Lewistown ST:MT Zip:59457
County:FERGUS

Contact:Bill Spoya
Phone:() -

Permit Type:Detection

Constituent:Cond Specific Conductivity

CAS Number: - -
MCL: 0.000 umhos/cm
ACL: 0.000 umhos/cm
Detect Limit: 1.000 umhos/cm

Start Date:Aug 16 1995
End Date:Jan 01 2000

Data Mode:Original

Background Wells

Well ID	N	%ND	Max Value	Min Value	Mean	Std Dev
SIMW-1	5	0	958.00	686.00	776.80	108.71

SIP-2	1	0	822.00	822.00	822.00	0.00
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Compliance Wells

Well ID	N	%ND	Max Value	Min Value	Mean	Std Dev
SIMW-2	10	0	1480.00	1040.00	1173.00	115.47
SIMW-3	9	0	893.00	683.00	749.22	61.01

Well ID	Date	Observation	Rank
SIMW-1	08/16/95	958.0000	15.0
SIMW-1	06/03/97	786.0000	12.0
SIMW-1	11/04/97	751.0000	9.0
SIMW-1	06/15/99	686.0000	2.0
SIMW-1	06/15/99	703.0000	3.0
SIP-2	11/26/96	822.0000	13.0

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Background Rank Sum: 54.0

Background Rank Avg: 9.0

SIMW-2	08/16/95	1480.0000	25.0
SIMW-2	06/10/96	1180.0000	23.5
SIMW-2	10/22/96	1180.0000	23.5
SIMW-2	06/03/97	1040.0000	16.0
SIMW-2	11/04/97	1110.0000	17.0
SIMW-2	06/16/98	1150.0000	20.5
SIMW-2	06/16/98	1150.0000	20.5
SIMW-2	10/06/98	1140.0000	19.0
SIMW-2	10/06/98	1130.0000	18.0
SIMW-2	06/15/99	1170.0000	22.0

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Compliance Well Rank Sum: 205.0

Compliance Well Rank Avg: 20.5

SIMW-3	08/16/95	893.0000	14.0
SIMW-3	06/10/96	750.0000	8.0
SIMW-3	10/22/96	706.0000	4.0
SIMW-3	06/03/97	683.0000	1.0
SIMW-3	11/04/97	767.0000	10.5
SIMW-3	11/04/97	767.0000	10.5
SIMW-3	06/16/98	739.0000	7.0
SIMW-3	10/06/98	731.0000	6.0
SIMW-3	06/15/99	707.0000	5.0

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Compliance Well Rank Sum: 66.0

Compliance Well Rank Avg: 7.3

H Statistic: 17.4923

H Adjusted for Ties: 17.5125

Degrees of Freedom: 2

Chi-Squared: 5.9915

ZA/DF: 1.9600

* Indicates significant evidence of contamination

Well ID	Crit.	Diff.	Rank Avg.	Background Rank Avg.	Difference
*SIMW-2	7.4375		20.50	9.00	11.50
SIMW-3	7.5909		7.33	9.00	-1.67

Prediction Intervals

Report Printed: 11-09-1999 16:19

Facility:D&A160

Sanitation, Inc.

Address:P.O. Box 882

City:Lewistown
County:FERGUS

ST:MT Zip:59457

Contact:Bill Spoya
Phone:() -

Permit Type:Detection

Constituent:Cond Specific Conductivity

CAS Number: - -

MCL: 0.000 umhos/cm

ACL: 0.000 umhos/cm

Detect Limit: 1.000 umhos/cm

Start Date:Aug 16 1995

End Date:Jan 01 2000

Data Mode:Original

Background Data

Well ID	Date	Observation
SIMW-2	08/16/95	1480.0000
SIMW-2	06/10/96	1180.0000
SIMW-2	10/22/96	1180.0000
SIMW-2	06/03/97	1040.0000
SIMW-2	11/04/97	1110.0000
SIMW-2	06/16/98	1150.0000
SIMW-2	06/16/98	1150.0000
SIMW-2	10/06/98	1140.0000
SIMW-2	10/06/98	1130.0000

Summary Statistics

Observations: 9
Mean: 1173.333
Std Dev: 122.474
Shapiro-Wilk: 0.671

1% Critical Value: 0.764
5% Critical Value: 0.829

Future Data

Well:SIMW-2

Date	Observation
06/15/99	1170.0000

Summary Statistics

Observations: 1
Mean: 1173.333
Std Dev: 122.474

Prediction Intervals

Significance Level:0.050000

Date Range	Observations	Mean	Interval
06/15/99-06/30/99	1	1170.000	[0.0- 1413.400]

* Since the Mean for this period exceeds the upper prediction limit,
there is significant evidence of contamination.

Prediction Intervals

Report Printed: 11-09-1999 16:19

Facility:D&A160 Sanitation, Inc.

Address:P.O. Box 882

City:Lewistown ST:MT Zip:59457
County:FERGUS

Contact:Bill Spoya
Phone:() -

Permit Type:Detection

Constituent:Cond	Specific Conductivity
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CAS Number: - -

MCL: 0.000 umhos/cm

ACL: 0.000 umhos/cm

Detect Limit: 1.000 umhos/cm

Start Date:Aug 16 1995

End Date:Jan 01 2000

Data Mode:Original

Background Data

Well ID	Date	Observation
SIMW-3	08/16/95	893.0000

SIMW-3	06/10/96	750.0000
SIMW-3	10/22/96	706.0000
SIMW-3	06/03/97	683.0000
SIMW-3	11/04/97	767.0000
SIMW-3	11/04/97	767.0000
SIMW-3	06/16/98	739.0000
SIMW-3	10/06/98	731.0000

Summary Statistics

Observations: 8
Mean: 754.500
Std Dev: 62.988
Shapiro-Wilk: 0.850

Mean: 754.500
Std Dev: 62.988

1

707.500 10.0

F&T 978

The mean for this period exceeds the upper prediction limit.
There is significant evidence of contamination.

14.20

contaminated, but.

are not

ADMT Exp-52151

0.000 mg/l

0.100 mg/l

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0.100 mg/l

0.100 mg/l

0.100 mg/l

0.100 mg/l

0.100 mg/l

1% Critical Value: 0.749
5% Critical Value: 0.818

Future Data

Well:SIMW-3

Date	Observation
06/15/99	707.0000

Summary Statistics

Observations: 1
Mean: 754.500
Std Dev: 62.988

Prediction Intervals

Significance Level:0.050000

Date Range	Observations	Mean	Interval
06/15/99-06/30/99	1	707.000 [0.0-	881.074]

* Since the Mean for this period exceeds the upper prediction limit,
there is significant evidence of contamination.

Kruskal-Wallace Test

Report Printed: 11-09-1999 16:20

Facility:D&A160 Sanitation, Inc.

Address:P.O. Box 882

City:Lewistown ST:MT Zip:59457
County:FERGUS

Contact:Bill Spoya
Phone:() -

Permit Type:Detection

Constituent:NO3/NO2 Nitrate,Nitrite

CAS Number: - -
MCL: 0.000 mg/l
ACL: 0.000 mg/l
Detect Limit: 0.000 mg/l

Start Date:Aug 16 1995
End Date:Jan 01 2000

Data Mode:Original

Background Wells

Well ID	N %ND	Max Value	Min Value	Mean	Std Dev
SIMW-1	7 0	5.56	3.74	4.52	0.73

SIP-2	1	0	1.79	1.79	1.79	0.00
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Compliance Wells

Well ID	N	%ND	Max Value	Min Value	Mean	Std Dev
SIMW-2	10	0	4.18	2.11	3.14	0.79
SIMW-3	9	0	12.20	8.96	10.00	1.27

Well ID	Date	Observation	Rank
SIMW-1	08/16/95	4.4900	16.0
SIMW-1	06/10/96	4.2400	15.0
SIMW-1	06/03/97	5.5600	18.0
SIMW-1	11/04/97	3.7400	8.0
SIMW-1	10/06/98	5.5200	17.0
SIMW-1	06/15/99	4.0400	12.5
SIMW-1	06/15/99	4.0400	12.5
SIP-2	11/26/96	1.7900	1.0

Background Rank Sum: 100.0			
Background Rank Avg: 12.5			
SIMW-2	08/16/95	3.7800	9.0
SIMW-2	06/10/96	4.1800	14.0
SIMW-2	10/22/96	2.6000	5.0
SIMW-2	06/03/97	2.1100	2.0
SIMW-2	11/04/97	3.9500	10.0
SIMW-2	06/16/98	2.3200	3.0
SIMW-2	06/16/98	2.3700	4.0
SIMW-2	10/06/98	3.9700	11.0
SIMW-2	10/06/98	2.8300	6.0
SIMW-2	06/15/99	3.2600	7.0

Compliance Well Rank Sum: 71.0			
Compliance Well Rank Avg: 7.1			
SIMW-3	08/16/95	8.9600	19.0
SIMW-3	06/10/96	9.2500	23.0
SIMW-3	10/22/96	9.0900	21.0
SIMW-3	06/03/97	9.0800	20.0
SIMW-3	11/04/97	9.5300	24.0
SIMW-3	11/04/97	9.2000	22.0
SIMW-3	06/16/98	12.2000	27.0
SIMW-3	10/06/98	11.0000	25.0
SIMW-3	06/15/99	11.7000	26.0

Compliance Well Rank Sum: 207.0			
Compliance Well Rank Avg: 23.0			

H Statistic: 19.4143
H Adjusted for Ties: 19.4202
Degrees of Freedom: 2
Chi-Squared: 5.9915
ZA/DF: 1.9600

* Indicates significant evidence of contamination

Well ID	Crit. Diff.	Rank Avg.	Background Rank Avg.	Difference
SIMW-2	7.3792	7.10	12.50	-5.40
*SIMW-3	7.5592	23.00	12.50	10.50

Report Printed: 11-09-1999 16:20

Address:P.O. Box 882

City:Lewistown
County:FERGUS

ST:MT Zip:59457

Contact:Bill Spoya
Phone:() -

Permit Type:Detection

Constituent:NO3/NO2 Nitrate,Nitrite

CAS Number: - -

MCL: 0.000 mg/l

ACL: 0.000 mg/l

Detect Limit: 0.000 mg/l

Start Date:Aug 16 1995

End Date:Jan 01 2000

Normal Tolerance Intervals On Background Data

Data Mode:Original

Background Wells

Well ID	N	%ND	Max Value	Min Value	Mean	Std Dev
SIMW-1	7	0	5.56	3.74	4.52	0.73
SIP-2	1	0	1.79	1.79	1.79	0.00

Compliance Wells

Well ID	N	%ND	Max Value	Min Value	Mean	Std Dev
SIMW-2	10	0	4.18	2.11	3.14	0.79
SIMW-3	9	0	12.20	8.96	10.00	1.27

Background Observations: 8
Background Data Mean: 4.1775
Background Data Std Dev: 1.1799
Tolerance Factor: 3.1880

Upper 95% Coverage Tolerance
With Tolerance Coef. Of 95%: 7.9389

* Indicates significant evidence of contamination

Well ID	Date	Observation
SIMW-2	08/16/95	3.7800
SIMW-2	06/10/96	4.1800
SIMW-2	10/22/96	2.6000
SIMW-2	06/03/97	2.1100
SIMW-2	11/04/97	3.9500
SIMW-2	06/16/98	2.3200
SIMW-2	06/16/98	2.3700
SIMW-2	10/06/98	3.9700
SIMW-2	10/06/98	2.8300
SIMW-2	06/15/99	3.2600
*SIMW-3	08/16/95	8.9600
*SIMW-3	06/10/96	9.2500
*SIMW-3	10/22/96	9.0900

*SIMW-3	06/03/97	9.5000
*SIMW-3	11/04/97	9.5300
*SIMW-3	11/04/97	9.2000
*SIMW-3	06/16/98	12.2000
*SIMW-3	10/06/98	11.0000
*SIMW-3	06/15/99	11.7000
SIMW-1	08/16/95	4.4900
SIMW-1	06/10/96	4.2400
SIMW-1	06/03/97	5.5600
SIMW-1	11/04/97	3.7400
SIMW-1	10/06/98	5.5200
SIMW-1	06/15/99	4.0400
SIMW-1	06/15/99	4.0400
SIP-2	11/26/96	1.7900

Prediction Intervals

Report Printed: 11-09-1999 16:20

Facility:D&A160 Sanitation, Inc.

Address:P.O. Box 882

City:Lewistown ST:MT Zip:59457
County:FERGUS

Contact:Bill Spoya
Phone:() -

Permit Type:Detection

Constituent:NO3/NO2

DATE)+DUP_CODE GW_DATE GWDATA FCID+WELL_ID+PARAMETER+REP_CODE+DTOS(SAMP_

DEFAULT

CAS Number:~±

MCL: 0.000

ACL: 0.000

Detect Limit: 0.000

Start Date:

End Date:

Kruskal-Wallace Test

Report Printed: 11-09-1999 16:27

Facility:D&A160 Sanitation, Inc.

Address:P.O. Box 882

City:Lewistown ST:MT Zip:59457
County:FERGUS

Contact:Bill Spoya
Phone:() -

Permit Type:Detection

Constituent:1,1,1Tri 1,1,1-Trichloroethane

CAS Number: 71-55-6

MCL: 0.000 g/l

ACL: 0.000 ug/l

Detect Limit: 1.000 ug/l

Start Date: Aug 16 1995

End Date: Jan 01 2000

Data Mode: Original

Background Wells

Well ID	N	%ND	Max Value	Min Value	Mean	Std Dev
SIMW-1	7	0	0.77	0.34	0.49	0.16
SIP-2	2	100	0.50	0.50	0.50	0.00

Compliance Wells

Well ID	N	%ND	Max Value	Min Value	Mean	Std Dev
SIMW-2	11	55	1.20	0.18	0.50	0.25
SIMW-3	9	78	0.54	0.34	0.49	0.06

Well ID	Date	Observation	Rank
SIMW-1	08/16/95	0.6700	27.0
SIMW-1	06/10/96	0.3400	17.5
SIMW-1	06/03/97	0.7700	28.0
SIMW-1	11/04/97	0.4000	21.0
SIMW-1	10/06/98	0.4200	23.0
SIMW-1	06/15/99	0.4300	25.0
SIMW-1	06/15/99	0.4200	23.0
SIP-2	11/26/96	0.5000	8.0
SIP-2	06/16/98	0.5000	8.0

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Background Rank Sum: 180.5

Background Rank Avg: 20.1

SIMW-2	08/16/95	0.5000	8.0
SIMW-2	06/10/96	0.1800	16.0
SIMW-2	10/22/96	0.5000	8.0
SIMW-2	06/03/97	0.5000	8.0
SIMW-2	06/03/97	0.5000	8.0
SIMW-2	11/04/97	0.4200	23.0
SIMW-2	06/16/98	0.5000	8.0
SIMW-2	06/16/98	0.5000	8.0
SIMW-2	10/06/98	0.3900	20.0
SIMW-2	10/06/98	0.3600	19.0
SIMW-2	06/15/99	1.2000	29.0

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Compliance Well Rank Sum: 155.0

Compliance Well Rank Avg: 14.1

SIMW-3	08/16/95	0.5400	26.0
SIMW-3	06/10/96	0.5000	8.0
SIMW-3	10/22/96	0.5000	8.0
SIMW-3	06/03/97	0.5000	8.0
SIMW-3	11/04/97	0.5000	8.0
SIMW-3	11/04/97	0.5000	8.0
SIMW-3	06/16/98	0.5000	8.0
SIMW-3	10/06/98	0.5000	8.0
SIMW-3	06/15/99	0.3400	17.5

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Compliance Well Rank Sum: 99.5

Compliance Well Rank Avg: 11.1

H Statistic: 5.2296
H Adjusted for Ties: 6.0750
Degrees of Freedom: 2
Chi-Squared: 5.9915
ZA/DF: 1.9600

* Indicates significant evidence of contamination

Well ID	Crit.	Diff.	Rank Avg.	Background Rank	Avg. Difference
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SIMW-2	7.4750		14.09	20.06	-5.96
SIMW-3	7.8399		11.06	20.06	-9.00

Kruskal-Wallis Test

Report Printed: 11-09-1999 16:27

Facility:D&A160 Sanitation, Inc.

Address:P.O. Box 882

City:Lewistown ST:MT Zip:59457
County:FERGUS

Contact:Bill Spoya
Phone:() -

Permit Type:Detection

Constituent:1,1DCE 1,1-Dichloroethane

CAS Number: 75-34-3
MCL: 0.000 ug/l
ACL: 0.000 ug/l
Detect Limit: 1.000 ug/l

Start Date:Aug 16 1995
End Date:Jan 01 2000

Data Mode:Original

Background Wells

Well ID	N	%ND	Max Value	Min Value	Mean	Std Dev
SIMW-1	7	100	0.50	0.50	0.50	0.00
SIP-2	2	50	0.50	0.30	0.40	0.14

Compliance Wells

Well ID	N	%ND	Max Value	Min Value	Mean	Std Dev
SIMW-2	11	91	0.50	0.22	0.47	0.08
SIMW-3	9	89	0.50	0.21	0.47	0.10

Well ID	Date	Observation	Rank
SIMW-1	08/16/95	0.5000	13.5
SIMW-1	06/10/96	0.5000	13.5
SIMW-1	06/03/97	0.5000	13.5

SIMW-1	11/04/97	0.5000	13.5
SIMW-1	10/06/98	0.5000	13.5
SIMW-1	06/15/99	0.5000	13.5
SIMW-1	06/15/99	0.5000	13.5
SIP-2	11/26/96	0.3000	29.0
SIP-2	06/16/98	0.5000	13.5

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Background Rank Sum:	137.0
Background Rank Avg:	15.2

SIMW-2	08/16/95	0.5000	13.5
SIMW-2	06/10/96	0.5000	13.5
SIMW-2	10/22/96	0.5000	13.5
SIMW-2	06/03/97	0.5000	13.5
SIMW-2	06/03/97	0.5000	13.5
SIMW-2	11/04/97	0.5000	13.5
SIMW-2	06/16/98	0.5000	13.5
SIMW-2	06/16/98	0.5000	13.5
SIMW-2	10/06/98	0.5000	13.5
SIMW-2	10/06/98	0.5000	13.5
SIMW-2	06/15/99	0.2200	28.0

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Compliance Well Rank Sum:	163.0
Compliance Well Rank Avg:	14.8

SIMW-3	08/16/95	0.2100	27.0
SIMW-3	06/10/96	0.5000	13.5
SIMW-3	10/22/96	0.5000	13.5
SIMW-3	06/03/97	0.5000	13.5
SIMW-3	11/04/97	0.5000	13.5
SIMW-3	11/04/97	0.5000	13.5
SIMW-3	06/16/98	0.5000	13.5
SIMW-3	10/06/98	0.5000	13.5
SIMW-3	06/15/99	0.5000	13.5

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Compliance Well Rank Sum:	135.0
Compliance Well Rank Avg:	15.0

H Statistic:	0.0111
H Adjusted for Ties:	0.0398
Degrees of Freedom:	2
Chi-Squared:	5.9915
ZÁ/DF:	1.9600

* Indicates significant evidence of contamination

Well ID	Crit. Diff.	Rank Avg.	Background Rank Avg.	Difference
SIMW-2	7.4750	14.82	15.22	-0.40
SIMW-3	7.8399	15.00	15.22	-0.22

Kruskal-Wallace Test
Report Printed: 11-09-1999 16:28

Facility:D&A160 Sanitation, Inc.

Address:P.O. Box 882

City:Lewistown
County:FERGUS

ST:MT Zip:59457

Contact:Bill Spoya
Phone:() -

Permit Type:Detection

Constituent:DClDFlMe Dic. Perodifluoromethane

CAS Number: 75-71-8

MCL: 0.000 ug/l

ACL: 0.000 ug/l

Detect Limit: 1.000 ug/l

Start Date:Aug 16 1995

End Date:Jan 01 2000

Data Mode:Original

Background Wells

Well ID	N	%ND	Max Value	Min Value	Mean	Std Dev
SIMW-1	7	0	0.68	0.51	0.57	0.07
SIP-2	2	0	1.80	1.30	1.55	0.35

Compliance Wells

Well ID	N	%ND	Max Value	Min Value	Mean	Std Dev
SIMW-2	11	45	0.51	0.18	0.39	0.14
SIMW-3	9	56	1.20	0.20	0.54	0.27

Well ID	Date	Observation	Rank
SIMW-1	08/16/95	0.6500	25.0
SIMW-1	06/10/96	0.5800	24.0
SIMW-1	06/03/97	0.5300	20.5
SIMW-1	11/04/97	0.6800	26.0
SIMW-1	10/06/98	0.5400	22.0
SIMW-1	06/15/99	0.5300	20.5
SIMW-1	06/15/99	0.5100	18.5
SIP-2	11/26/96	1.3000	28.0
SIP-2	06/16/98	1.8000	29.0

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Background Rank Sum: 213.5

Background Rank Avg: 23.7

SIMW-2	08/16/95	0.5000	5.5
SIMW-2	06/10/96	0.1800	11.0
SIMW-2	10/22/96	0.2300	13.0
SIMW-2	06/03/97	0.5000	5.5
SIMW-2	06/03/97	0.5000	5.5
SIMW-2	11/04/97	0.2600	14.0
SIMW-2	06/16/98	0.5000	5.5
SIMW-2	06/16/98	0.5000	5.5
SIMW-2	10/06/98	0.2800	15.5
SIMW-2	10/06/98	0.2800	15.5
SIMW-2	06/15/99	0.5100	18.5

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Compliance Well Rank Sum: 115.0

Compliance Well Rank Avg: 10.5

SIMW-3	08/16/95	0.2000	12.0
SIMW-3	06/10/96	0.5000	5.5
SIMW-3	10/22/96	0.5000	5.5
SIMW-3	06/03/97	0.5000	5.5
SIMW-3	11/04/97	0.5000	5.5
SIMW-3	11/04/97	0.5000	5.5
SIMW-3	06/16/98	1.2000	27.0
SIMW-3	10/06/98	0.4500	17.0

SIMW-3 06/15/99 C 500 23.0

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Compliance Well Rank Sum: 106.5

Compliance Well Rank Avg: 11.8

H Statistic: 13.8237

H Adjusted for Ties: 14.4204

Degrees of Freedom: 2

Chi-Squared: 5.9915

ZÁ/DF: 1.9600

* Indicates significant evidence of contamination

Well ID Crit. Diff. Rank Avg. Background Rank Avg. Difference

SIMW-2 7.4750 10.45 23.72 -13.27

SIMW-3 7.8399 11.83 23.72 -11.89

Kruskal-Wallace Test

Report Printed: 11-09-1999 16:28

Facility:D&A160 Sanitation, Inc.

Address:P.O. Box 882

City:Lewistown

ST:MT Zip:59457

County:FERGUS

Contact:Bill Spoya

Phone:() -

Permit Type:Detection

Constituent:TC1F1Me Trichlorofluoromethane

CAS Number: 75-69-4

MCL: 0.000 ug/l

ACL: 0.000 ug/l

Detect Limit: 1.000 ug/l

Start Date:Aug 16 1995

End Date:Jan 01 2000

Data Mode:Original

Background Wells

Well ID	N	%ND	Max Value	Min Value	Mean	Std Dev
SIMW-1	7	0	0.49	0.33	0.41	0.06
SIP-2	2	0	1.40	0.32	0.86	0.76

Compliance Wells

Well ID	N	%ND	Max Value	Min Value	Mean	Std Dev
SIMW-2	11	55	1.40	0.15	0.49	0.34
SIMW-3	9	56	1.40	0.17	0.51	0.36

Well ID	Date	Observation	Rank
SIMW-1	08/16/95	0.3900	26.0
SIMW-1	06/10/96	0.4000	22.5
SIMW-1	06/03/97	0.4700	24.0
SIMW-1	11/04/97	0.3300	19.0
SIMW-1	10/06/98	0.3700	20.0
SIMW-1	06/15/99	0.3900	21.0
SIMW-1	06/15/99	0.4000	22.5
SIP-2	11/26/96	0.3200	18.0
SIP-2	06/16/98	1.4000	28.0

aaaaaaaaaaaa

Background Rank Sum: 201.0

Background Rank Avg: 22.3

SIMW-2	08/16/95	0.5000	6.0
SIMW-2	06/10/96	0.1600	13.0
SIMW-2	10/22/96	0.1500	12.0
SIMW-2	06/03/97	0.5000	6.0
SIMW-2	06/03/97	0.5000	6.0
SIMW-2	11/04/97	0.2000	15.0
SIMW-2	06/16/98	1.4000	28.0
SIMW-2	06/16/98	0.5000	6.0
SIMW-2	10/06/98	0.5000	6.0
SIMW-2	10/06/98	0.5000	6.0
SIMW-2	06/15/99	0.4800	25.0

aaaaaaaaaaaa

Compliance Well Rank Sum: 129.0

Compliance Well Rank Avg: 11.7

SIMW-3	08/16/95	0.1700	14.0
SIMW-3	06/10/96	0.5000	6.0
SIMW-3	10/22/96	0.5000	6.0
SIMW-3	06/03/97	0.5000	6.0
SIMW-3	11/04/97	0.5000	6.0
SIMW-3	11/04/97	0.5000	6.0
SIMW-3	06/16/98	1.4000	28.0
SIMW-3	10/06/98	0.2200	16.0
SIMW-3	06/15/99	0.2900	17.0

aaaaaaaaaaaa

Compliance Well Rank Sum: 105.0

Compliance Well Rank Avg: 11.7

H Statistic: 9.6803

H Adjusted for Ties: 10.2375

Degrees of Freedom: 2

Chi-Squared: 5.9915

Z²/DF: 1.9600

* Indicates significant evidence of contamination

Well ID	Crit. Diff.	Rank Avg.	Background Rank Avg.	Difference
SIMW-2	7.4750	11.73	22.33	-10.61
SIMW-3	7.8399	11.67	22.33	-10.67

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FAX (406) 252-6069 • 1-800-735-4489 • E-MAIL eli@energylab.com**LABORATORY ANALYSIS REPORT****Damschen and Associates, Inc.****Bruce Siegmund****PO Box 4817****Helena, MT 59604****Project ID:****SANITATION INC., LEWISTOWN, MT.****Sample ID:****SIMW-1****Laboratory ID:****99-53844-1****Sample Matrix:****Water****Sample Date:****15-Jun-99 1230****Received at lab:****21-Jun-99****Reported: 09-Jul-99**

	Results	Units	Qual	Reporting	Regulatory	Method	Analyzed
				Limit	Limit		
Chloride	23	mg/l		1		EPA 300.0	23-Jun-99 2346 RLH
Sulfate	77	mg/l		1		EPA 300.0	23-Jun-99 2346 RLH
Specific Conductance @ 25 C	686	umhos/cm		1		EPA 120.1	21-Jun-99 1549 QED
pH	7.9	s.u.		0.1		EPA 150.1	21-Jun-99 1549 QED
Ammonia as N	<0.1	mg/l	U	0.1		EPA 350.1	22-Jun-99 1740 BAS
Chemical Oxygen Demand	<1	mg/l	U	1		EPA 410.4	30-Jun-99 1630 BS
Nitrate + Nitrite as N	4.04	mg/l		0.05		EPA 353.2	22-Jun-99 1740 BAS
Total Cyanide	<0.005	mg/l	U	0.005		EPA 335.3	23-Jun-99 0900 ND
Antimony, Dissolved	<0.05	mg/l	U	0.05		EPA 200.8	06-Jul-99 2316 LAB
Arsenic, Dissolved	<0.005	mg/l	U	0.005		EPA 200.8	06-Jul-99 2316 LAB
Barium, Dissolved	<0.1	mg/l	U	0.1		EPA 200.8	06-Jul-99 2316 LAB
Beryllium, Dissolved	<0.001	mg/l	U	0.001		EPA 200.7	06-Jul-99 2245 RLH
Cadmium, Dissolved	<0.001	mg/l	U	0.001		EPA 200.8	06-Jul-99 2316 LAB
Chromium, Dissolved	<0.01	mg/l	U	0.01		EPA 200.8	06-Jul-99 2316 LAB
Cobalt, Dissolved	<0.01	mg/l	U	0.01		EPA 200.8	06-Jul-99 2316 LAB
Copper, Dissolved	<0.01	mg/l	U	0.01		EPA 200.8	06-Jul-99 2316 LAB
Iron, Dissolved	<0.03	mg/l	U	0.03		EPA 200.7	06-Jul-99 2245 RLH
Lead, Dissolved	<0.01	mg/l	U	0.01		EPA 200.8	06-Jul-99 2316 LAB
Mercury, Dissolved	<0.001	mg/l	U	0.001		EPA 200.8	06-Jul-99 2316 LAB
Nickel, Dissolved	<0.01	mg/l	U	0.01		EPA 200.8	06-Jul-99 2316 LAB
Selenium, Dissolved	0.018	mg/l		0.005		EPA 200.8	06-Jul-99 2316 LAB
Silver, Dissolved	<0.005	mg/l	U	0.005		EPA 200.8	06-Jul-99 2316 LAB
Thallium, Dissolved	<0.1	mg/l	U	0.1		EPA 200.8	06-Jul-99 2316 LAB
Vanadium, Dissolved	<0.1	mg/l	U	0.1		EPA 200.8	06-Jul-99 2316 LAB
Zinc, Dissolved	0.02	mg/l		0.01		EPA 200.8	06-Jul-99 2316 LAB

U= Indicates the parameter was analyzed for but not detected.



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Client: Damschen and Associates, Inc.
Date Sampled: 15-JUN-99 12:30
Date Received: 21-JUN-99
Analysis Date: 24-JUN-1999 05:04
Project Info: SANITATION INC., LEWISTOWN, MT.
Sample Info: SIMW-1

Lab No.: 001-99-53844
Report Date: 07/03/99 18:13
Extraction Method: EPA 5030
Sample Matrix: WATER; pH= < 7

RECEIVED
JUL 19 1999
DAMSCHE & ASSOCIATES

EPA METHOD 8260A: VOLATILE ORGANICS ANALYSIS REPORT

CONCENTRATION UNITS = ug/L (ppb)			
COMPOUNDS	CAS NO.	RESULT	QUALIFIER
Acetone	67-64-1	<20	U
Acrylonitrile	107-13-1	<20	U
Benzene	71-43-2	<1.0	U
Bromochloromethane	74-97-5	<1.0	U
Bromodichloromethane	75-27-4	<1.0	U
Bromoform	75-25-2	<1.0	U
Bromomethane	74-83-9	<1.0	U
Carbon disulfide	75-15-0	<1.0	U
Carbon tetrachloride	56-23-5	<1.0	U
Chlorobenzene	108-90-7	<1.0	U
Chlorodibromomethane	124-48-1	<1.0	U
Chloroethane	75-00-3	<1.0	U
Chloroform	67-66-3	<1.0	U
Chloromethane	74-87-3	<1.0	U
1,2-Dibromo-3-chloropropane	96-12-8	<1.0	U
1,2-Dibromoethane	106-93-4	<1.0	U
Dibromomethane	74-95-3	<1.0	U
1,2-Dichlorobenzene	95-50-1	<1.0	U
1,4-Dichlorobenzene	106-46-7	<1.0	U
trans-1,4-Dichloro-2-butene	110-57-6	<2.0	U
Dichlorodifluoromethane	75-71-8	<1.0	0.53J
1,1-Dichloroethane	75-34-3	<1.0	U
1,2-Dichloroethane	107-06-2	<1.0	U
1,1-Dichloroethene	75-35-4	<1.0	U
cis-1,2-Dichloroethene	156-59-2	<1.0	U
trans-1,2-Dichloroethene	156-60-5	<1.0	U
1,2-Dichloropropane	78-87-5	<1.0	U
cis-1,3-Dichloropropene	10061-01-5	<1.0	U
trans-1,3-Dichloropropene	10061-02-6	<1.0	U
Ethylbenzene	100-41-4	<1.0	U
2-Hexanone	591-78-6	<20	U
Iodomethane	74-88-4	<1.0	U
Methyl ethyl ketone	78-93-3	<20	U
Methyl isobutyl ketone	108-10-1	<20	U
Methylene chloride	75-09-2	<1.0	U
Styrene	100-42-5	<1.0	U
1,1,1,2-Tetrachloroethane	630-20-6	<1.0	U
1,1,2,2-Tetrachloroethane	79-34-5	<1.0	U
Tetrachloroethene	127-18-4	<1.0	U
Toluene	108-88-3	<1.0	U
1,1,1-Trichloroethane	71-55-6	<1.0	0.43J
1,1,2-Trichloroethane	79-00-5	<1.0	U
Trichloroethene	79-01-6	<1.0	U
Trichlorofluoromethane	75-69-4	<1.0	0.39J
1,2,3-Trichloropropane	96-18-4	<1.0	U
Vinyl acetate	108-05-4	<1.0	U
Vinyl chloride	75-01-4	<1.0	U
m+p-Xylenes	108383/106423	<1.0	U
o-Xylene	95-47-6	<1.0	U

SURROGATE RECOVERY REPORT

Surrogate Compound	Added-ug/L	Measured-ug/L	%Rec	QC Limits
1,2-Dichloroethane d4	10.0	11.2	112	80--120
Toluene d8	10.0	10.2	102	80--120
p-Bromofluorobenzene	10.0	9.65	97	80--120

QUALIFIER CODE EXPLANATIONS AND NOTES:

U= Indicates compound was analyzed for but not detected.

J= Estimated value. Present, but less than the limit of quantitation.

REPORT COMMENTS: None

Analyst: GO Reviewing Supervisor: nm

/chem/5971A.i/va062399.b/jun232601026.d

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FAX (406) 252-6069 • 1-800-735-4489 • E-MAIL eli@energylab.com**LABORATORY ANALYSIS REPORT****Damschen and Associates, Inc.**
Bruce Siegmund
PO Box 4817
Helena, MT 59604**Project ID: SANITATION INC., LEWISTOWN, MT.**
Sample ID: SIMW-1 D
Laboratory ID: 99-53844-2
Sample Matrix: Water
Sample Date: 15-Jun-99 1230
Received at lab: 21-Jun-99**Reported: 09-Jul-99**

	Results	Units	Qual	Reporting	Regulatory	Method	Analyzed
				Limit	Limit		
Chloride	24	mg/l		1		EPA 300.0	23-Jun-99 2355 RLH
Sulfate	76	mg/l		1		EPA 300.0	23-Jun-99 2355 RLH
Specific Conductance @ 25 C	703	umhos/cm		1		EPA 120.1	21-Jun-99 1551 QED
pH	7.9	s.u.		0.1		EPA 150.1	21-Jun-99 1551 QED
Ammonia as N	<0.1	mg/l	U	0.1		EPA 350.1	22-Jun-99 1741 BAS
Chemical Oxygen Demand	<1	mg/l	U	1		EPA 410.4	30-Jun-99 1630 BS
Nitrate + Nitrite as N	4.04	mg/l		0.05		EPA 353.2	22-Jun-99 1741 BAS
Total Cyanide	<0.005	mg/l	U	0.005		EPA 335.3	23-Jun-99 0900 ND
Antimony, Dissolved	<0.05	mg/l	U	0.05		EPA 200.8	06-Jul-99 2321 LAB
Arsenic, Dissolved	<0.005	mg/l	U	0.005		EPA 200.8	06-Jul-99 2321 LAB
Barium, Dissolved	<0.1	mg/l	U	0.1		EPA 200.8	06-Jul-99 2321 LAB
Beryllium, Dissolved	<0.001	mg/l	U	0.001		EPA 200.7	06-Jul-99 2247 RLH
Cadmium, Dissolved	<0.001	mg/l	U	0.001		EPA 200.8	06-Jul-99 2321 LAB
Chromium, Dissolved	<0.01	mg/l	U	0.01		EPA 200.8	06-Jul-99 2321 LAB
Cobalt, Dissolved	<0.01	mg/l	U	0.01		EPA 200.8	06-Jul-99 2321 LAB
Copper, Dissolved	<0.01	mg/l	U	0.01		EPA 200.8	06-Jul-99 2321 LAB
Iron, Dissolved	<0.03	mg/l	U	0.03		EPA 200.7	06-Jul-99 2247 RLH
Lead, Dissolved	<0.01	mg/l	U	0.01		EPA 200.8	06-Jul-99 2321 LAB
Mercury, Dissolved	<0.001	mg/l	U	0.001		EPA 200.8	06-Jul-99 2321 LAB
Nickel, Dissolved	<0.01	mg/l	U	0.01		EPA 200.8	06-Jul-99 2321 LAB
Selenium, Dissolved	0.018	mg/l		0.005		EPA 200.8	06-Jul-99 2321 LAB
Silver, Dissolved	<0.005	mg/l	U	0.005		EPA 200.8	06-Jul-99 2321 LAB
Thallium, Dissolved	<0.1	mg/l	U	0.1		EPA 200.8	06-Jul-99 2321 LAB
Vanadium, Dissolved	<0.1	mg/l	U	0.1		EPA 200.8	06-Jul-99 2321 LAB
Zinc, Dissolved	0.01	mg/l		0.01		EPA 200.8	06-Jul-99 2321 LAB

U Indicates the parameter was analyzed for but not detected.



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Client: Damschen and Associates, Inc.

Date Sampled: 15-JUN-99 12:30

Date Received: 21-JUN-99

Analysis Date: 24-JUN-1999 05:39

Project Info: SANITATION INC., LEWISTOWN, MT.

Sample Info: SIMW-1 D

Lab No.: 002-99-53844

Report Date: 07/03/99 18:13

Extraction Method: EPA 5030

Sample Matrix: WATER; pH= < 2

EPA METHOD 8260A: VOLATILE ORGANICS ANALYSIS REPORT

COMPOUNDS	CONCENTRATION UNITS = ug/L (ppb)		QUALIFIER
	CAS NO.	RESULT	
Acetone	67-64-1	<20	U
Acrylonitrile	107-13-1	<20	U
Benzene	71-43-2	<1.0	U
Bromochloromethane	74-97-5	<1.0	U
Bromodichloromethane	75-27-4	<1.0	U
Bromoform	75-25-2	<1.0	U
Bromomethane	74-83-9	<1.0	U
Carbon disulfide	75-15-0	<1.0	U
Carbon tetrachloride	56-23-5	<1.0	U
Chlorobenzene	108-90-7	<1.0	U
Chlorodibromomethane	124-48-1	<1.0	U
Chloroethane	75-00-3	<1.0	U
Chloroform	67-66-3	<1.0	U
Chloromethane	74-87-3	<1.0	U
1,2-Dibromo-3-chloropropane	96-12-8	<1.0	U
1,2-Dibromoethane	106-93-4	<1.0	U
Dibromomethane	74-95-3	<1.0	U
1,2-Dichlorobenzene	95-50-1	<1.0	U
1,4-Dichlorobenzene	106-46-7	<1.0	U
trans-1,4-Dichloro-2-butene	110-57-6	<2.0	U
Dichlorodifluoromethane	75-71-8	<1.0	0.51J
1,1-Dichloroethane	75-34-3	<1.0	U
1,2-Dichloroethane	107-06-2	<1.0	U
1,1-Dichloroethene	75-35-4	<1.0	U
cis-1,2-Dichloroethene	156-59-2	<1.0	U
trans-1,2-Dichloroethene	156-60-5	<1.0	U
1,2-Dichloropropane	78-87-5	<1.0	U
cis-1,3-Dichloropropene	10061-01-5	<1.0	U
trans-1,3-Dichloropropene	10061-02-6	<1.0	U
Ethylbenzene	100-41-4	<1.0	U
2-Hexanone	591-78-6	<20	U
Iodomethane	74-88-4	<1.0	U
Methyl ethyl ketone	78-93-3	<20	U
Methyl isobutyl ketone	108-10-1	<20	U
Methylene chloride	75-09-2	<1.0	U
Styrene	100-42-5	<1.0	U
1,1,1,2-Tetrachloroethane	630-20-6	<1.0	U
1,1,2,2-Tetrachloroethane	79-34-5	<1.0	U
Tetrachloroethene	127-18-4	<1.0	U
Toluene	108-88-3	<1.0	U
1,1,1-Trichloroethane	71-55-6	<1.0	0.42J
1,1,2-Trichloroethane	79-00-5	<1.0	U
Trichloroethene	79-01-6	<1.0	U
Trichlorofluoromethane	75-69-4	<1.0	0.40J
1,2,3-Trichloropropane	96-18-4	<1.0	U
Vinyl acetate	108-05-4	<1.0	U
Vinyl chloride	75-01-4	<1.0	U
m+p-Xylenes	108383/106423	<1.0	U
o-Xylene	95-47-6	<1.0	U

SURROGATE RECOVERY REPORT

Surrogate Compound	Added-ug/L	Measured-ug/L	%Rec	QC Limits
1,2-Dichloroethane d4	10.0	11.2	112	80--120
Toluene d8	10.0	10.4	104	80--120
p-Bromofluorobenzene	10.0	9.82	98	80--120

QUALIFIER CODE EXPLANATIONS AND NOTES:

U- Indicates compound was analyzed for but not detected.

J- Estimated value. Present, but less than the limit of quantitation.

REPORT COMMENTS: None

Analyst: G Reviewing Supervisor: M

/chem/5971A.1/va062399.b/jun232701027.d

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FAX (406) 252-6069 • 1-800-735-4489 • E-MAIL eli@energylab.com**LABORATORY ANALYSIS REPORT****Damschen and Associates, Inc.**
Bruce Siegmund
PO Box 4817
Helena, MT 59604**Project ID: SANITATION INC., LEWISTOWN, MT.**
Sample ID: SIMW-2
Laboratory ID: 99-53844-3
Sample Matrix: Water
Sample Date: 15-Jun-99 1330
Received at lab: 21-Jun-99**Reported: 09-Jul-99**

	Results	Units	Qual	Reporting	Regulatory	Method	Analyzed
				Limit	Limit		
Chloride	30 mg/l			1		EPA 300.0	24-Jun-99 0004 RLH
Sulfate	177 mg/l			1		EPA 300.0	24-Jun-99 0004 RLH
Specific Conductance @ 25 C	1170 umhos/cm			1		EPA 120.1	21-Jun-99 1552 QED
pH	7.7 s.u.			0.1		EPA 150.1	21-Jun-99 1552 QED
Ammonia as N	<0.1 mg/l	U		0.1		EPA 350.1	22-Jun-99 1741 BAS
Chemical Oxygen Demand	<1 mg/l	U		1		EPA 410.4	30-Jun-99 1630 BS
Nitrate + Nitrite as N	3.26 mg/l			0.05		EPA 353.2	22-Jun-99 1741 BAS
Total Cyanide	<0.005 mg/l	U		0.005		EPA 335.3	23-Jun-99 0900 ND
Antimony, Dissolved	<0.05 mg/l	U		0.05		EPA 200.8	06-Jul-99 2326 LAB
Arsenic, Dissolved	<0.005 mg/l	U		0.005		EPA 200.8	06-Jul-99 2326 LAB
Barium, Dissolved	<0.1 mg/l	U		0.1		EPA 200.8	06-Jul-99 2326 LAB
Beryllium, Dissolved	<0.001 mg/l	J		0.001		EPA 200.7	06-Jul-99 2251 RLH
Cadmium, Dissolved	<0.001 mg/l	U		0.001		EPA 200.8	06-Jul-99 2326 LAB
Chromium, Dissolved	<0.01 mg/l	U		0.01		EPA 200.8	06-Jul-99 2326 LAB
Cobalt, Dissolved	<0.01 mg/l	U		0.01		EPA 200.8	06-Jul-99 2326 LAB
Copper, Dissolved	<0.01 mg/l	U		0.01		EPA 200.8	06-Jul-99 2326 LAB
Iron, Dissolved	<0.03 mg/l	J		0.03		EPA 200.7	06-Jul-99 2251 RLH
Lead, Dissolved	<0.01 mg/l	U		0.01		EPA 200.8	06-Jul-99 2326 LAB
Mercury, Dissolved	<0.001 mg/l	U		0.001		EPA 200.8	06-Jul-99 2326 LAB
Nickel, Dissolved	<0.01 mg/l	U		0.01		EPA 200.8	06-Jul-99 2326 LAB
Selenium, Dissolved	0.006 mg/l			0.005		EPA 200.8	06-Jul-99 2326 LAB
Silver, Dissolved	<0.005 mg/l	U		0.005		EPA 200.8	06-Jul-99 2326 LAB
Thallium, Dissolved	<0.1 mg/l	U		0.1		EPA 200.8	06-Jul-99 2326 LAB
Vanadium, Dissolved	<0.1 mg/l	U		0.1		EPA 200.8	06-Jul-99 2326 LAB
Zinc, Dissolved	0.01 mg/l			0.01		EPA 200.8	06-Jul-99 2326 LAB

J Present, but less than the practical quantitation limit.

U Indicates the parameter was analyzed for but not detected.



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Client: Damschen and Associates, Inc.

Date Sampled: 15-JUN-99 13:30

Date Received: 21-JUN-99

Analysis Date: 24-JUN-1999 06:13

Project Info: SANITATION INC., LEWISTOWN, MT.

Sample Info: SIMW-2

Lab No.: 003-99-53844

Report Date: 07/03/99 18:13

Extraction Method: EPA 5030

Sample Matrix: WATER; pH= < 2

EPA METHOD 8260A: VOLATILE ORGANICS ANALYSIS REPORT

COMPOUNDS	CAS NO.	CONCENTRATION UNITS = ug/L (ppb)	RESULT	QUALIFIER
Acetone	67-64-1		<20	U
Acrylonitrile	107-13-1		<20	U
Benzene	71-43-2		<1.0	U
Bromochloromethane	74-97-5		<1.0	U
Bromodichloromethane	75-27-4		<1.0	U
Bromoform	75-25-2		<1.0	U
Bromomethane	74-83-9		<1.0	U
Carbon disulfide	75-15-0		<1.0	U
Carbon tetrachloride	56-23-5		<1.0	U
Chlorobenzene	108-90-7		<1.0	U
Chlorodibromomethane	124-48-1		<1.0	U
Chloroethane	75-00-3		<1.0	U
Chloroform	67-66-3		<1.0	U
Chloromethane	74-87-3		<1.0	U
1,2-Dibromo-3-chloropropane	96-12-8		<1.0	U
1,2-Dibromoethane	106-93-4		<1.0	U
Dibromomethane	74-95-3		<1.0	U
1,2-Dichlorobenzene	95-50-1		<1.0	U
1,4-Dichlorobenzene	106-46-7		<1.0	U
trans-1,4-Dichloro-2-butene	110-57-6		<2.0	U
Dichlorodifluoromethane	75-71-8		<1.0	0.56J
1,1-Dichloroethane	75-34-3		<1.0	0.22J
1,2-Dichloroethane	107-06-2		<1.0	U
1,1-Dichloroethene	75-35-4		<1.0	U
cis-1,2-Dichloroethene	156-59-2		<1.0	U
trans-1,2-Dichloroethene	156-60-5		<1.0	U
1,2-Dichloropropane	78-87-5		<1.0	U
cis-1,3-Dichloropropene	10061-01-5		<1.0	U
trans-1,3-Dichloropropene	10061-02-6		<1.0	U
Ethylbenzene	100-41-4		<1.0	U
2-Hexanone	591-78-6		<20	U
Iodomethane	74-88-4		<1.0	U
Methyl ethyl ketone	78-93-3		<20	U
Methyl isobutyl ketone	108-10-1		<20	U
Methylene chloride	75-09-2		<1.0	U
Styrene	100-42-5		<1.0	U
1,1,1,2-Tetrachloroethane	630-20-6		<1.0	U
1,1,2,2-Tetrachloroethane	79-34-5		<1.0	U
Tetrachloroethene	127-18-4		<1.0	U
Toluene	108-88-3		<1.0	U
1,1,1-Trichloroethane	71-55-6		1.2	
1,1,2-Trichloroethane	79-00-5		<1.0	U
Trichloroethene	79-01-6		<1.0	U
Trichlorofluoromethane	75-69-4		<1.0	0.48J
1,2,3-Trichloropropane	96-18-4		<1.0	U
Vinyl acetate	108-05-4		<1.0	U
Vinyl chloride	75-01-4		<1.0	U
m+p-Xylenes	108383/106423		<1.0	U
o-Xylene	95-47-6		<1.0	U

----- SURROGATE RECOVERY REPORT -----

Surrogate Compound	Added-ug/L	Measured-ug/L	%Rec	QC Limits
1,2-Dichloroethane d4	10.0	11.0	110	80--120
Toluene d8	10.0	10.3	103	80--120
p-Bromofluorobenzene	10.0	10.1	101	80--120

QUALIFIER CODE EXPLANATIONS AND NOTES:

U- Indicates compound was analyzed for but not detected.

J- Estimated value. Present, but less than the limit of quantitation.

REPORT COMMENTS: None

Analyst: ES Reviewing Supervisor: nm

/chem/5971A.i/va062399.b/jun232801028.d

**ENERGY LABORATORIES, INC.**P.O. BOX 30916 • 1120 SOUTH 27TH STREET • BILLINGS, MT 59107-0916 • PHONE (406) 252-6325
FAX (406) 252-6069 • 1-800-735-4489 • E-MAIL eli@energylab.com**LABORATORY ANALYSIS REPORT****Damschen and Associates, Inc.**
Bruce Siegmund
PO Box 4817
Helena, MT 59604**Project ID: SANITATION INC., LEWISTOWN, MT.**
Sample ID: SIMW-3
Laboratory ID: 99-53844-4
Sample Matrix: Water
Sample Date: 15-Jun-99 1430
Received at lab: 21-Jun-99**Reported: 09-Jul-99**

	Results	Units	Qual	Reporting	Regulatory	Method	Analyzed
				Limit	Limit		
Chloride	25	mg/l		1		EPA 300.0	24-Jun-99 0012 RLH
Sulfate	121	mg/l		1		EPA 300.0	24-Jun-99 0012 RLH
Specific Conductance @ 25 C	707	umhos/cm		1		EPA 120.1	21-Jun-99 1554 QED
pH	8.2	s.u.		0.1		EPA 150.1	21-Jun-99 1554 QED
Ammonia as N	<0.1	mg/l	U	0.1		EPA 350.1	22-Jun-99 1743 BAS
Chemical Oxygen Demand	4	mg/l		1		EPA 410.4	30-Jun-99 1630 BS
Nitrate + Nitrite as N	11.7	mg/l		0.05		EPA 353.2	22-Jun-99 1743 BAS
Total Cyanide	<0.005	mg/l	U	0.005		EPA 335.3	23-Jun-99 0900 ND
Antimony, Dissolved	<0.05	mg/l	U	0.05		EPA 200.8	06-Jul-99 2352 LAB
Arsenic, Dissolved	0.011	mg/l		0.005		EPA 200.8	06-Jul-99 2352 LAB
Barium, Dissolved	0.3	mg/l		0.1		EPA 200.8	06-Jul-99 2352 LAB
Beryllium, Dissolved	0.002	mg/l		0.001		EPA 200.7	06-Jul-99 2255 RLH
Cadmium, Dissolved	0.003	mg/l		0.001		EPA 200.8	06-Jul-99 2352 LAB
Chromium, Dissolved	0.07	mg/l		0.01		EPA 200.8	06-Jul-99 2352 LAB
Cobalt, Dissolved	0.09	mg/l		0.01		EPA 200.8	06-Jul-99 2352 LAB
Copper, Dissolved	0.07	mg/l		0.01		EPA 200.8	06-Jul-99 2352 LAB
Iron, Dissolved	12.9	mg/l		0.03		EPA 200.7	06-Jul-99 2255 RLH
Lead, Dissolved	0.12	mg/l		0.01		EPA 200.8	06-Jul-99 2352 LAB
Mercury, Dissolved	<0.001	mg/l	U	0.001		EPA 200.8	06-Jul-99 2352 LAB
Nickel, Dissolved	0.11	mg/l		0.01		EPA 200.8	06-Jul-99 2352 LAB
Selenium, Dissolved	0.074	mg/l		0.005		EPA 200.8	06-Jul-99 2352 LAB
Silver, Dissolved	<0.005	mg/l	U	0.005		EPA 200.8	06-Jul-99 2352 LAB
Thallium, Dissolved	<0.1	mg/l	U	0.1		EPA 200.8	06-Jul-99 2352 LAB
Vanadium, Dissolved	0.1	mg/l		0.1		EPA 200.8	06-Jul-99 2352 LAB
Zinc, Dissolved	0.47	mg/l		0.01		EPA 200.8	06-Jul-99 2352 LAB

U Indicates the parameter was analyzed for but not detected.



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FAX (406) 252-6069 • 1-800-735-4489 • E-MAIL eli@energylab.comClient: Damachen and Associates, Inc.
Date Sampled: 15-JUN-99 14:30
Date Received: 21-JUN-99
Analysis Date: 24-JUN-1999 06:49
Project Info: SANITATION INC., LEWISTOWN, MT.
Sample Info: SIMW-3Lab No.: 004-99-53844
Report Date: 07/03/99 18:13
Extraction Method: EPA 5030
Sample Matrix: WATER; pH= < 2

EPA METHOD 8260A: VOLATILE ORGANICS ANALYSIS REPORT

COMPOUNDS	CAS NO.	CONCENTRATION UNITS = ug/L (ppb)	RESULT	QUALIFIER
Acetone	67-64-1		<20	U
Acrylonitrile	107-13-1		<20	U
Benzene	71-43-2		<1.0	U
Bromochloromethane	74-97-5		<1.0	U
Bromodichloromethane	75-27-4		<1.0	U
Bromoform	75-25-2		<1.0	U
Bromomethane	74-83-9		<1.0	U
Carbon disulfide	75-15-0		<1.0	U
Carbon tetrachloride	56-23-5		<1.0	U
Chlorobenzene	108-90-7		<1.0	U
Chlorodibromomethane	124-48-1		<1.0	U
Chloroethane	75-00-3		<1.0	U
Chloroform	67-66-3		<1.0	U
Chloromethane	74-87-3		<1.0	U
1,2-Dibromo-3-chloropropane	96-12-8		<1.0	U
1,2-Dibromoethane	106-93-4		<1.0	U
Dibromomethane	74-95-3		<1.0	U
1,2-Dichlorobenzene	95-50-1		<1.0	U
1,4-Dichlorobenzene	106-46-7		<1.0	U
trans-1,4-Dichloro-2-butene	110-57-6		<2.0	U
Dichlorodifluoromethane	75-71-8		<1.0	0.55J
1,1-Dichloroethane	75-34-3		<1.0	U
1,2-Dichloroethane	107-06-2		<1.0	U
1,1-Dichloroethene	75-35-4		<1.0	U
cis-1,2-Dichloroethene	156-59-2		<1.0	U
trans-1,2-Dichloroethene	156-60-5		<1.0	U
1,2-Dichloropropane	78-87-5		<1.0	U
cis-1,3-Dichloropropene	10061-01-5		<1.0	U
trans-1,3-Dichloropropene	10061-02-6		<1.0	U
Ethylbenzene	100-41-4		<1.0	U
2-Hexanone	591-78-6		<20	U
Iodomethane	74-88-4		<1.0	U
Methyl ethyl ketone	78-93-3		<20	U
Methyl isobutyl ketone	108-10-1		<20	U
Methylene chloride	75-09-2		<1.0	U
Styrene	100-42-5		<1.0	U
1,1,1,2-Tetrachloroethane	630-20-6		<1.0	U
1,1,2,2-Tetrachloroethane	79-34-5		<1.0	U
Tetrachloroethene	127-18-4		<1.0	U
Toluene	108-88-3		<1.0	U
1,1,1-Trichloroethane	71-55-6		<1.0	0.34J
1,1,2-Trichloroethane	79-00-5		<1.0	U
Trichloroethene	79-01-6		<1.0	U
Trichlorofluoromethane	75-69-4		<1.0	0.29J
1,2,3-Trichloropropane	96-18-4		<1.0	U
Vinyl acetate	108-05-4		<1.0	U
Vinyl chloride	75-01-4		<1.0	U
m+p-Xylenes	108383/106423		<1.0	U
o-Xylene	95-47-6		<1.0	U

SURROGATE RECOVERY REPORT

Surrogate Compound	Added-ug/L	Measured-ug/L	%Rec	QC Limits
1,2-Dichloroethane d4	10.0	11.0	110	80--120
Toluene d8	10.0	10.2	102	80--120
p-Bromofluorobenzene	10.0	9.91	99	80--120

QUALIFIER CODE EXPLANATIONS AND NOTES:

U= Indicates compound was analyzed for but not detected.

J= Estimated value. Present, but less than the limit of quantitation.

REPORT COMMENTS: None

Analyst: Reviewing Supervisor:

/chem/5971A.1/va062399.b/jun232901029.d



ENERGY LABORATORIES, INC.

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FAX (406) 252-6069 • 1-800-735-4489 • E-MAIL eli@energylab.comClient: Damschen and Associates, Inc.
Date Sampled:
Date Received: 21-JUN-99
Analysis Date: 24-JUN-1999 03:54
Project Info: SANITATION INC., LEWISTOWN, MT.
Sample Info: TRIP BLANKLab No.: 005-99-53844
Report Date: 07/03/99 18:09
Extraction Method: EPA 5030
Sample Matrix: WATER, pH= < 2

EPA METHOD 8260A: VOLATILE ORGANICS ANALYSIS REPORT

COMPOUNDS	CAS NO.	CONCENTRATION UNITS = ug/L (ppb)	RESULT	QUALIFIER
Acetone	67-64-1		<20	U
Acrylonitrile	107-13-1		<20	U
Benzene	71-43-2		<1.0	U
Bromochloromethane	74-97-5		<1.0	U
Bromodichloromethane	75-27-4		<1.0	U
Bromoform	75-25-2		<1.0	U
Bromomethane	74-83-9		<1.0	U
Carbon disulfide	75-15-0		<1.0	U
Carbon tetrachloride	56-23-5		<1.0	U
Chlorobenzene	108-90-7		<1.0	U
Chlorodibromomethane	124-48-1		<1.0	U
Chloroethane	75-00-3		<1.0	U
Chloroform	67-66-3		<1.0	U
Chloromethane	74-87-3		<1.0	U
1,2-Dibromo-3-chloropropane	96-12-8		<1.0	U
1,2-Dibromoethane	106-93-4		<1.0	U
Dibromomethane	74-95-3		<1.0	U
1,2-Dichlorobenzene	95-50-1		<1.0	U
1,4-Dichlorobenzene	106-46-7		<1.0	U
trans-1,4-Dichloro-2-butene	110-57-6		<2.0	U
Dichlorodifluoromethane	75-71-8		<1.0	U
1,1-Dichloroethane	75-34-3		<1.0	U
1,2-Dichloroethane	107-06-2		<1.0	U
1,1-Dichloroethene	75-35-4		<1.0	U
cis-1,2-Dichloroethene	156-59-2		<1.0	U
trans-1,2-Dichloroethene	156-60-5		<1.0	U
1,2-Dichloropropane	78-87-5		<1.0	U
cis-1,3-Dichloropropene	10061-01-5		<1.0	U
trans-1,3-Dichloropropene	10061-02-6		<1.0	U
Ethylbenzene	100-41-4		<1.0	U
2-Hexanone	591-78-6		<20	U
Iodomethane	74-88-4		<1.0	U
Methyl ethyl ketone	78-93-3		<20	U
Methyl isobutyl ketone	108-10-1		<20	U
Methylene chloride	75-09-2		<1.0	U
Styrene	100-42-5		<1.0	U
1,1,1,2-Tetrachloroethane	630-20-6		<1.0	U
1,1,2,2-Tetrachloroethane	79-34-5		<1.0	U
Tetrachloroethene	127-18-4		<1.0	U
Toluene	108-88-3		<1.0	U
1,1,1-Trichloroethane	71-55-6		<1.0	U
1,1,2-Trichloroethane	79-00-5		<1.0	U
Trichloroethene	79-01-6		<1.0	U
Trichlorofluoromethane	75-69-4		<1.0	U
1,2,3-Trichloropropane	96-18-4		<1.0	U
Vinyl acetate	108-05-4		<1.0	U
Vinyl chloride	75-01-4		<1.0	U
m+p-Xylenes	108383/106423		<1.0	U
o-Xylene	95-47-6		<1.0	U

SURROGATE RECOVERY REPORT

Surrogate Compound	Added-ug/L	Measured-ug/L	%Rec	QC Limits
1,2-Dichloroethane d4	10.0	11.3	113	80--120
Toluene d8	10.0	10.5	105	80--120
p-Bromofluorobenzene	10.0	9.64	96	80--120

QUALIFIER CODE EXPLANATIONS AND NOTES:

U= Indicates compound was analyzed for but not detected.

REPORT COMMENTS: None

Analyst:  Reviewing Supervisor: 

/chem/5971A.i/va062399.b/jun232401024.d

Quality Control Sample: Laboratory Reagent Blank 24-JUN-1999 03:18

Report Date: 07/03/99 18:02

Extraction Method: EPA 5030

Sample Matrix: WATER

Remarks: This Laboratory Reagent Blank Quality Control Sample was extracted and analyzed with your set of samples to determine if method analytes or other interferences are present in the laboratory environment, the reagents, or the apparatus.

EPA METHOD 8260A: VOLATILE ORGANICS ANALYSIS REPORT

CONCENTRATION UNITS = ug/L (ppb)			
COMPOUNDS	CAS NO.	RESULT	QUALIFIER
Acetone	67-64-1	<20	U
Acrylonitrile	107-13-1	<20	U
Benzene	71-43-2	<1.0	U
Bromochloromethane	74-97-5	<1.0	U
Bromodichloromethane	75-27-4	<1.0	U
Bromoform	75-25-2	<1.0	U
Bromomethane	74-83-9	<1.0	U
Carbon disulfide	75-15-0	<1.0	U
Carbon tetrachloride	56-23-5	<1.0	U
Chlorobenzene	108-90-7	<1.0	U
Chlorodibromomethane	124-48-1	<1.0	U
Chloroethane	75-00-3	<1.0	U
Chloroform	67-66-3	<1.0	U
Chloromethane	74-87-3	<1.0	U
1,2-Dibromo-3-chloropropane	96-12-8	<1.0	U
1,2-Dibromoethane	106-93-4	<1.0	U
Dibromomethane	74-95-3	<1.0	U
1,2-Dichlorobenzene	95-50-1	<1.0	U
1,4-Dichlorobenzene	106-46-7	<1.0	U
trans-1,4-Dichloro-2-butene	110-57-6	<2.0	U
Dichlorodifluoromethane	75-71-8	<1.0	U
1,1-Dichloroethane	75-34-3	<1.0	U
1,2-Dichloroethane	107-06-2	<1.0	U
1,1-Dichloroethene	75-35-4	<1.0	U
cis-1,2-Dichloroethene	156-59-2	<1.0	U
trans-1,2-Dichloroethene	156-60-5	<1.0	U
1,2-Dichloropropane	78-87-5	<1.0	U
cis-1,3-Dichloropropene	10061-01-5	<1.0	U
trans-1,3-Dichloropropene	10061-02-6	<1.0	U
Ethylbenzene	100-41-4	<1.0	U
2-Hexanone	591-78-6	<20	U
Iodomethane	74-88-4	<1.0	U
Methyl ethyl ketone	78-93-3	<20	U
Methyl isobutyl ketone	108-10-1	<20	U
Methylene chloride	75-09-2	<1.0	U
Styrene	100-42-5	<1.0	U
1,1,1,2-Tetrachloroethane	630-20-6	<1.0	U
1,1,2,2-Tetrachloroethane	79-34-5	<1.0	U
Tetrachloroethene	127-18-4	<1.0	U
Toluene	108-88-3	<1.0	U
1,1,1-Trichloroethane	71-55-6	<1.0	U
1,1,2-Trichloroethane	79-00-5	<1.0	U
Trichloroethene	79-01-6	<1.0	U
Trichlorofluoromethane	75-69-4	<1.0	U
1,2,3-Trichloropropane	96-18-4	<1.0	U
Vinyl acetate	108-05-4	<1.0	U
Vinyl chloride	75-01-4	<1.0	U
m+p-Xylenes	108383/106423	<1.0	U
o-Xylene	95-47-6	<1.0	U

----- SURROGATE RECOVERY REPORT -----

Surrogate Compound	Added-ug/L	Measured-ug/L	%Rec	QC Limits
1,2-Dichloroethane d4	10.0	10.8	108	80--120
Toluene d8	10.0	10.8	108	80--120
p-Bromofluorobenzene	10.0	9.82	98	80--120

QUALIFIER CODE EXPLANATIONS AND NOTES:

U - Indicates compound was analyzed for but not detected.

REPORT COMMENTS: None

Analyst: Reviewing Supervisor:

/chem/5971A.i/va062399.b/jun232301023.d

EPA METHOD 8260A: QUALITY ASSURANCE BLANK MATRIX SPIKE REPORT

Quality Control Sample: Reference Sample Analysis 23-JUN-1999 15:09

Report Date: 07/03/99 16:59

Extraction Method: EPA 5030

Sample Matrix: WATER

File: /chem/5971A.i/va062399.b/jun230301003.d

Remarks: This reference sample was spiked into a blank sample matrix then extracted and analyzed with your set of samples to determine if the methodology is in control and to monitor the laboratory's ability to produce accurate results.

Spike Compound	CONCENTRATION UNITS = ug/L (ppb)			
	Added	Measured	%Rec	QC Limits
Acetone	50.0	47.6	95	60--140
Benzene	5.00	5.30	106	60--140
Bromochloromethane	5.00	5.47	109	60--140
Bromodichloromethane	5.00	5.15	103	60--140
Bromoform	5.00	4.94	99	60--140
Bromomethane	5.00	4.29	86	60--140
Carbon tetrachloride	5.00	5.22	104	60--140
Chlorobenzene	5.00	5.22	104	60--140
Chlorodibromomethane	5.00	5.01	100	60--140
Chloroethane	5.00	5.04	101	60--140
Chloroform	5.00	5.49	110	60--140
Chloromethane	5.00	4.94	99	60--140
1,2-Dibromo-3-chloropropane	5.00	4.46	89	60--140
1,2-Dibromoethane	5.00	4.95	99	60--140
Dibromomethane	5.00	5.27	105	60--140
1,2-Dichlorobenzene	5.00	4.53	91	60--140
1,4-Dichlorobenzene	5.00	5.08	102	60--140
Dichlorodifluoromethane	5.00	5.85	117	60--140
1,1-Dichloroethane	5.00	5.72	114	60--140
1,1-Dichloroethene	5.00	5.85	117	60--140
cis-1,2-Dichloroethene	5.00	5.33	107	60--140
trans-1,2-Dichloroethene	5.00	5.68	114	60--140
1,2-Dichloropropane	5.00	4.52	90	60--140
cis-1,3-Dichloropropene	5.00	5.61	112	60--140
trans-1,3-Dichloropropene	5.00	5.05	101	60--140
Ethylbenzene	5.00	5.28	106	60--140
2-Hexanone	50.0	43.4	87	60--140
Methyl ethyl ketone	50.0	45.0	90	60--140
Methyl isobutyl ketone	50.0	42.4	85	60--140
Methylene chloride	5.00	5.54	111	60--140
Styrene	5.00	5.11	102	60--140
1,1,1,2-Tetrachloroethane	5.00	5.04	101	60--140
1,1,2,2-Tetrachloroethane	5.00	4.43	89	60--140
Tetrachloroethene	5.00	5.56	111	60--140
Toluene	5.00	5.19	104	60--140
1,1,1-Trichloroethane	5.00	5.40	108	60--140
1,1,2-Trichloroethane	5.00	4.88	98	60--140
Trichloroethene	5.00	5.24	105	60--140
Trichlorofluoromethane	5.00	4.82	96	60--140
1,2,3-Trichloropropene	5.00	4.74	95	60--140
Vinyl chloride	5.00	4.81	96	60--140
m+p-Xylenes	10.0	10.7	107	60--140
o-Xylene	5.00	5.00	100	60--140

SURROGATE RECOVERY REPORT

Surrogate Compound	Added-ug/L	Measured-ug/L	%Rec	QC Limits
1,2-Dichloroethane d4	10.0	10.9	109	80--120
Toluene d8	10.0	10.6	106	80--120
p-Bromofluorobenzene	10.0	9.91	99	80--120

REPORT COMMENTS: None

Analyst: Reviewing Supervisor:

QUALITY ASSURANCE DATA PACKAGE

This report includes the results of quality assurance tests performed with the sample analyses. They are performed to determine if the methodology is in control and to monitor the laboratory's ability to produce accurate and precise results.

Constituents	Duplicate Analysis			Spiked	Blank Analysis, mg/l (ppm)	-----Calibration Verification-----	
	-----mg/l (ppm)-----		Analysis, %	Sample		Acceptance	Date Analyzed
	Original	Duplicate	Recovery	Analysis, mg/l (ppm)		Range, mg/l (ppm)	
Chloride	7	6	111	<1	13	11-14	06/24/99
Sulfate	260	259	111	<1	51	45-55	06/24/99
Conductivity @ 25°C, μ mhos/cm	707	704	N/A	1	N/A	N/A	06/21/99
pH @ 25°C, s.u.	8.2	8.2	N/A	N/A	N/A	N/A	06/21/99
Ammonia as N	<0.1	<0.1	100	<0.1	2.0	1.6-2.2	06/22/99
Chemical Oxygen Demand	5	4	95	<1	78	70-94	06/30/99
Nitrate plus Nitrite as N	3.26	3.28	96	<0.05	2.33	2.04-2.56	06/22/99
Cyanide, Total	0.019	0.019	106	<0.005	0.166	0.119-0.207	06/23/99

Dissolved Metals

Antimony	<0.05	<0.05	103		<0.05	0.05	0.04-0.06	07/06/99
Arsenic	<0.005	<0.005	99		<0.005	0.054	0.045-0.055	07/06/99
Barium	<0.1	<0.1	101		<0.1	0.06	0.04-0.06	07/06/99
Beryllium	<0.001	<0.001	103		<0.001	0.512	0.450-0.550	07/06/99
Cadmium	<0.001	<0.001	102		<0.001	0.051	0.045-0.055	07/06/99
Chromium	<0.01	<0.01	97		<0.01	0.05	0.04-0.06	07/06/99
Cobalt	<0.01	<0.01	92		<0.01	0.05	0.04-0.06	07/06/99
Copper	<0.01	<0.01	93		<0.01	0.05	0.04-0.06	07/06/99
Iron	<0.03	<0.03	103		<0.03	5.07	4.50-5.50	07/06/99
Lead	<0.01	<0.01	104		<0.01	0.05	0.04-0.06	07/06/99
Mercury	<0.001	<0.001	97		<0.001	0.005	0.004-0.006	07/06/99
Nickel	<0.01	<0.01	91		<0.01	0.05	0.04-0.06	07/06/99
Selenium	0.005	0.005	112		<0.005	0.054	0.045-0.055	07/06/99
Silver	<0.005	<0.005	82		<0.005	0.020	0.018-0.022	07/06/99
Thallium	<0.1	<0.1	102		<0.1	0.05	0.04-0.06	07/06/99
Vanadium	<0.1	<0.1	100		<0.1	0.05	0.04-0.06	07/06/99
Zinc	0.01	0.01	98		<0.01	0.05	0.04-0.06	07/06/99

Date: 21-JUN-99

Received by: Krystal McDonald

Logged In by: Krystal McDonald

SAMPLE CONDITION QA/QC REPORT

This report provides information about the condition of the sample(s)
and associated sample custody information on receipt at the laboratory.

Chain of Custody Form
Completed & Signed

Yes Comments: _____

Chain of Custody Seal

No Comments: _____

Intact

N/A Comments: _____

Signature Match Chain of Custody vs. Seal

N/A Comments: _____

Samples Received Cold

Yes Comments: _____

Samples Received Within Holding Time

Yes Comments: _____

Samples Received in Proper Containers

Yes Comments: _____

Samples Received Properly Preserved

Yes Comments: _____

Samples requiring analysis for volatile organics are tested for proper preservation at the time of analysis.
Any preservation problems encountered for these samples are noted on the analytical parameter report pages.

Client notified about sample discrepancies:

Who: _____ By: _____ Date/Time: _____

Method of Shipping: Hand Del

Additional comments: _____



Received Date: 6/20/99 Cust. No.: 01043
Login Date: 06/21/99 Custody Seal: Yes/No
Shipped by: WAO Intact: Yes/No
Shipping Bill #: _____ Signature Match?: Yes/No
Code Six: _____ If no - Reason: _____

[illegible]

DAMSCHEM & ASSOCIATES, INC.
Landfill Ground-Water Monitoring Field Report

Project Name/Number CAVITATION, INC Well Number 51mw-1
-1D

Sampler(s) BS/DS

Date 6/15/99 Time 1230

Conditions _____

Field Data:

Table (circle) (1) 2

Depth to Water 45.4' Total Depth _____

Volume of Water Purged NO PURGE - Barely enough For Sample

Temperature--#1 _____ --#2 _____ --#3 _____ --#4 _____

Conductivity--#1 1020 --#2 _____ --#3 _____ --#4 _____

pH--#1 10.01 --#2 _____ --#3 _____ --#4 _____

Recovery: h₁ 0 h₂ 0.02 time 57 sec

Sample Preservatives:

1000 ml, 6, w/ no preservative N/A
250 ml w/ H₂SO₄ (yellow) X
250 ml w/ HNO₃ (red), filtered /
250 ml w/ NaOH (green) /
500 ml w/ no preservative /
40 ml, 2, w/ HCl (blue) /

Comments (attach change of instrumentation information to this sheet if necessary):

DAMSCHEEN & ASSOCIATES, INC.
Landfill Ground-Water Monitoring Field Report

Project Name/Number SANTIAM INC Well Number SIMW 2

Sampler(s) BS/DS

Date 6/15/99 Time 1330

Conditions _____

Field Data:

Table (circle) (1) 2

Depth to Water 34.32 Total Depth 42.5

Volume of Water Purged _____

Temperature--#1 _____ --#2 2.5 --#3 3.5 --#4 21

Conductivity--#1 2270 --#2 2050 --#3 2070 --#4 _____

pH--#1 8.23 --#2 8.25 --#3 7.95 --#4 _____

Recovery: h₁ 0 h₂ 0.1 time 12 sec

Sample Preservatives:

1000 ml, 6, w/ no preservative N/A
250 ml w/ H₂SO₄ (yellow) X
250 ml w/ HNO₃ (red), filtered _____
250 ml w/ NaOH (green) _____
500 ml w/ no preservative _____
40 ml, 2, w/ HCl (blue) _____

Comments (attach change of instrumentation information to this sheet if necessary):

DAMSCHEEN & ASSOCIATES, INC.
Landfill Ground-Water Monitoring Field Report

Project Name/Number Saniterra Inc Well Number Slmw-3

Sampler(s) BS

Date 6/15/99 Time 1430

Conditions _____

Field Data: Table (circle) 1 2

Depth to Water 30.11 Total Depth 39.5

Volume of Water Purged _____

Temperature--#1 _____ --#2 _____ --#3 _____ --#4 _____

Conductivity--#1 1200 --#2 1210 --#3 _____ --#4 _____

pH--#1 8.23 --#2 8.39 --#3 _____ --#4 _____

Recovery: h₁ _____ h₂ 0.1 time 1250 @ 38'

Sample Preservatives:

1000 ml, 6, w/ no preservative W/A

250 ml w/ H₂SO₄ (yellow) X

250 ml w/ HNO₃ (red), filtered |

250 ml w/ NaOH (green) |

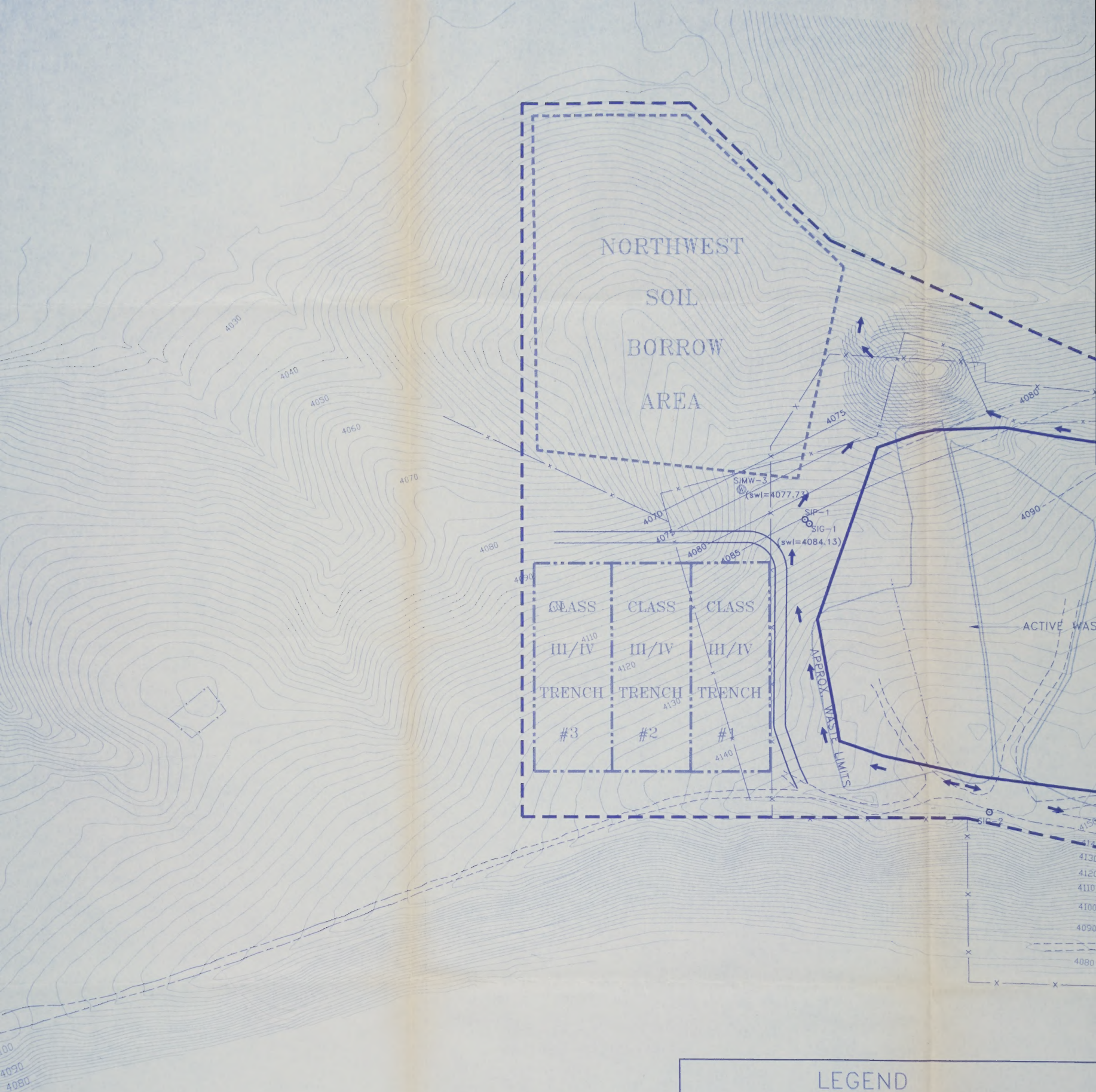
500 ml w/ no preservative |

40 ml, 2, w/ HCl (blue) |

Comments (attach change of instrumentation information to this sheet if necessary):

(no groundwater detected)





LEGEND

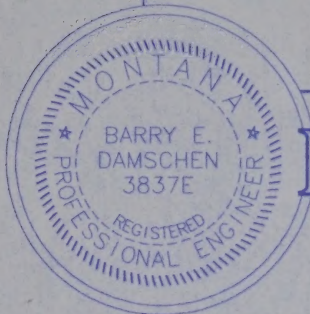
- SI-1 test boring (plugged)
- ▲ SIG-1 landfill gas monitoring well
- ◻ SIP-1 piezometer, showing static water level elevation (SWL=4100)
- ⊙ SIMW-1 ground-water monitoring well, showing static water level elevation (SWL=4100)
- water table contour; interval two feet
- contact of carbonaceous grey clay shale with overlying sandstone, siltstone and shale; dashed where obscured; dotted where uncertain
- topographic contour interval = 2 ft
- groundwater measurements from 10/6/98

PROJECT TITLE

SANITATION INC.
Lewistown, Montana

SHEET TITLE

Site Plan



D
&
A

Damschen & Associates, Inc.

CONSULTING ENGINEERS

• 2030 11th Ave., Suite 11 •
• HELENA, MONTANA •

JOB/ACAD NUMBER: 95-53

DRAWN BY: B. LLOYD

APPROVED BY: B.DAMSCHE

CHECKED BY: B. SIEGMUND

DATE: AUGUST, 1996

△		
△		
△		
△	12/29/98	BLS
#	DATE	REVISION

SHEET NO.

1
of 1



DAMSCHE & ASSOCIATES, INC.
CONSULTING ENGINEERS

2030 11TH AVENUE • SUITE 11
P.O. BOX 4817 • HELENA, MT 59604

TELEPHONE (406) 449-8627
FAX (406) 449-8631

September 28, 1998

Pat Potts
Montana Department of Environmental Quality
P.O. Box 200901
Helena, MT 59620-0901

Dear Ms. Potts:

Enclosed please find the results of the Spring, 1998 monitoring at the Sanitation, Inc. landfill in Lewistown, Montana. Sampling was undertaken on June 16, 1998.

Ground-Water Flow

Ground water was relatively low, but similar to low-water situations encountered previously. Monitoring well SIMW-1 was dry, so background samples had to be taken from SIP-2. Sufficient water was available from the other two wells for full sample sets.

Since it can be assumed that the hydraulic conductivity has not changed significantly in the vicinity of wells SIMW-1 and -2 and piezometer SIP-2, the seepage velocity can be calculated using the data and assumptions initially applied to this facility. The initial calculations used at SIMW-2 were a hydraulic conductivity of 75 feet per day (ft/day). The hydraulic gradient at this point is 0.045 and the porosity is assumed to be 0.35 because of the generally poor sorting of the sediments. The seepage velocity at SIMW-2, then, can be calculated using

$$V_s = KI/n_e$$

as 9.64 feet per day. The hydraulic conductivity at SIMW-3 was measured at 14.6 ft/day and the hydraulic gradient in the vicinity of the well is 0.056. Using the estimated porosity of 0.35, the seepage velocity can be calculated as 2.34 ft/day.

Ground-Water Quality

The volatile organic compounds (VOCs) previously detected at this facility have not experienced any significant change in their occurrence or concentration. Only two compounds were detected at the site, dichlorodifluoromethane and trichlorofluoromethane. The reported values were very low, and did not constitute statistical or maximum contaminant limit (MCL) exceedences. The value of 1.4 micrograms per liter ($\mu\text{g/l}$) reported for the sample from SIMW-2 was not repeatable in a duplicate, SIMW-2A.

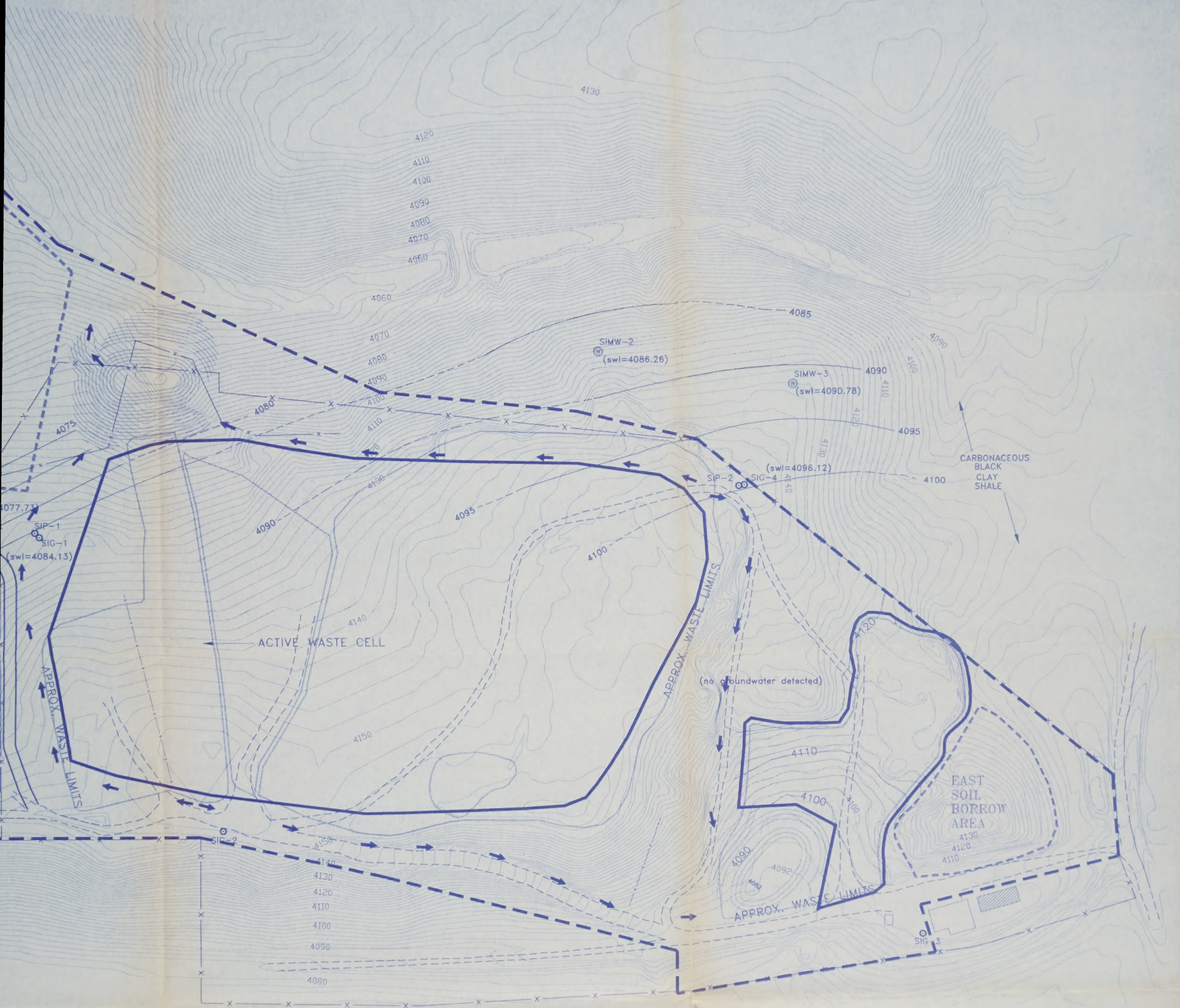
As noted above, a combination of insufficient water in the piezometer and extraordinary precipitation at the time of sampling precluded the collection of a complete set of data from SIP-

File: Fergus Co
Sanitation Inc.
grdwtr (ANALY)

RECEIVED

SEP 30 1998

MONTANA
DEPT. OF ENVIRONMENTAL QUALITY
COMMUNITY SERVICES BUREAU



LEGEND

test boring (plugged)
landfill gas monitoring well
piezometer, showing static water level elevation

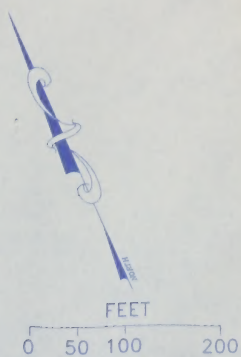
ground-water monitoring well, showing static water level elevation.

water table contour; interval two feet

contact of carbonaceous grey clay shale with overlying sandstone, siltstone and shale; dashed where obscured; dotted where uncertain

contour interval = 2 ft

measurements from 10/6/98



PROJECT TITLE

SANITATION INC.
Lewistown, Montana

SHEET TITLE

Site Plan



D
&
A

Damschen & Associates, Inc.

CONSULTING ENGINEERS

2030 11th Ave., Suite 11
HELENA, MONTANA

JOB/ACAD NUMBER: 95-53
DRAWN BY: B. LLOYD
APPROVED BY: B. DAMSCHEN
CHECKED BY: B. SIEGMUND
DATE: AUGUST, 1996

#	DATE	REVISION
1	10/29/98	BLS

SHEET NO
1
of 1



DAMSCHE & ASSOCIATES, INC.
CONSULTING ENGINEERS

2030 11TH AVENUE • SUITE 11
P.O. BOX 4817 • HELENA, MT 59604

TELEPHONE (406) 449-8627
FAX (406) 449-8631

September 28, 1998

Pat Potts
Montana Department of Environmental Quality
P.O. Box 200901
Helena, MT 59620-0901

Dear Ms. Potts:

Enclosed please find the results of the Spring, 1998 monitoring at the Sanitation, Inc. landfill in Lewistown, Montana. Sampling was undertaken on June 16, 1998.

Ground-Water Flow

Ground water was relatively low, but similar to low-water situations encountered previously. Monitoring well SIMW-1 was dry, so background samples had to be taken from SIP-2. Sufficient water was available from the other two wells for full sample sets.

Since it can be assumed that the hydraulic conductivity has not changed significantly in the vicinity of wells SIMW-1 and -2 and piezometer SIP-2, the seepage velocity can be calculated using the data and assumptions initially applied to this facility. The initial calculations used at SIMW-2 were a hydraulic conductivity of 75 feet per day (ft/day). The hydraulic gradient at this point is 0.045 and the porosity is assumed to be 0.35 because of the generally poor sorting of the sediments. The seepage velocity at SIMW-2, then, can be calculated using

$$V_s = KI/n_e$$

as 9.64 feet per day. The hydraulic conductivity at SIMW-3 was measured at 14.6 ft/day and the hydraulic gradient in the vicinity of the well is 0.056. Using the estimated porosity of 0.35, the seepage velocity can be calculated as 2.34 ft/day.

Ground-Water Quality

The volatile organic compounds (VOCs) previously detected at this facility have not experienced any significant change in their occurrence or concentration. Only two compounds were detected at the site, dichlorodifluoromethane and trichlorofluoromethane. The reported values were very low, and did not constitute statistical or maximum contaminant limit (MCL) exceedences. The value of 1.4 micrograms per liter ($\mu\text{g/l}$) reported for the sample from SIMW-2 was not repeatable in a duplicate, SIMW-2A.

As noted above, a combination of insufficient water in the piezometer and extraordinary precipitation at the time of sampling precluded the collection of a complete set of data from SIP-

File: Fergus Co
Sanitation Inc.
grd wtr (ANALY)

RECEIVED

SEP 30 1998

MONTANA
DEPT. OF ENVIRONMENTAL QUALITY
COMMUNITY SERVICES BUREAU

2. A full set of metals analysis was performed, but recharge was not occurring at a sufficient rate to collect the additional water. Extremely heavy precipitation and cold caused the failure of several pieces of equipment, include the pH/conductivity/temperature meter. I attempted to measure the pH, with a result of 6.15 standard units. This is within the range of previously-reported laboratory values, so it is probably accurate. However, the conductivity value was off-scale, which is probably incorrect, because reported laboratory values are only in the range of 820 micromhos per centimeter ($\mu\text{mho/cm}$). The meter can measure values to 20,000 $\mu\text{mho/cm}$. There was some concern about getting the vehicle out of the landfill safely, so the attempt to collect additional data was abandoned in favor of continuing with the other wells at the facility. All other samples were gathered successfully.

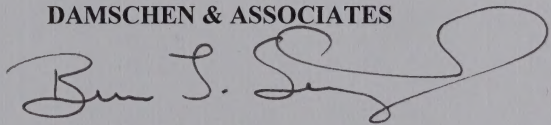
Sulfate, chloride and specific conductance were all determined to be statistical exceedences using ANOVA and prediction interval analysis employing background data from SIMW-1 and SIP-2. Prediction interval analysis performed on an intra-well basis showed that these three parameters did not exceed the anticipated level within a give data set. These results are also consistent with previous evaluations, so it appears that the exceedences represent naturally-occurring differences in water quality.

Nitrate was detected in monitoring well SIMW-3 in a concentration of 12.2 mg/l. This is higher than values reported previously, which have been reasonably consistent. There are no other indicators that support the presence of landfill leachate, so it is most likely that the increased nitrate is a result of the removal of topsoil and considerable dirt for the ongoing operations and the runoff collection pond.

If you have any questions or require any additional information, please do not hesitate to contact us.

Sincerely,

DAMSCHEN & ASSOCIATES

A handwritten signature in black ink, appearing to read "Bruce L. Siegmund", with a large, stylized flourish at the end.

Bruce L. Siegmund
Project Hydrogeologist

Enclosures

CC: Bill Spoya
Al Gallagher, Sanitation, Inc.

Facility:D&A160 Sanitation, Inc.

Address:P.O. Box 882

City:Lewistown ST:MT Zip:59457
County:FERGUS

Contact:Bill Spoya
Phone:() -

Permit Type:Detection

Constituent:DC1DF1Me Dichlorodifluoromethane

CAS Number: 75-71-8

MCL: 0.000 ug/l

ACL: 0.000 ug/l

Detect Limit: 1.000 ug/l

Start Date:Aug 16 1995

End Date:Jun 03 1999

Data Mode:Original

Background Wells

Well ID	N	%ND	Max Value	Min Value	Mean	Std Dev
SIMW-1	4	0	0.68	0.53	0.61	0.07
SIP-2	2	0	1.80	1.30	1.55	0.35

Compliance Wells

Well ID	N	%ND	Max Value	Min Value	Mean	Std Dev
SIMW-2	8	63	0.50	0.18	0.40	0.14
SIMW-3	7	71	1.20	0.20	0.56	0.30

Well ID	Date	Observation	Rank
SIMW-1	08/16/95	0.6500	17.0
SIMW-1	06/10/96	0.5800	16.0
SIMW-1	06/03/97	0.5300	15.0
SIMW-1	11/04/97	0.6800	18.0
SIP-2	11/26/96	1.3000	20.0
SIP-2	06/16/98	1.8000	21.0

aaaaaaaaaaaa

Background Rank Sum: 107.0

Background Rank Avg: 17.8

SIMW-2	08/16/95	0.5000	5.5
SIMW-2	06/10/96	0.1800	11.0
SIMW-2	10/22/96	0.2300	13.0
SIMW-2	06/03/97	0.5000	5.5
SIMW-2	06/03/97	0.5000	5.5
SIMW-2	11/04/97	0.2600	14.0
SIMW-2	06/16/98	0.5000	5.5
SIMW-2	06/16/98	0.5000	5.5

Compliance Well Rank Sum: 65.5
 Compliance Well Rank Avg: 8.2
 SIMW-3 08/16/95 0.2000 12.0
 SIMW-3 06/10/96 0.5000 5.5
 SIMW-3 10/22/96 0.5000 5.5
 SIMW-3 06/03/97 0.5000 5.5
 SIMW-3 11/04/97 0.5000 5.5
 SIMW-3 11/04/97 0.5000 5.5
 SIMW-3 06/16/98 1.2000 19.0
 Compliance Well Rank Sum: 58.5
 Compliance Well Rank Avg: 8.4

H Statistic: 10.1907
 H Adjusted for Ties: 11.4135
 Degrees of Freedom: 2
 Chi-Squared: 5.9915
 Z²/DF: 1.9600

* Indicates significant evidence of contamination

Well ID	Crit. Diff.	Rank Avg.	Background Rank Avg.	Difference
SIMW-2	6.5250	8.19	17.83	-9.65
SIMW-3	6.7218	8.36	17.83	-9.48

Kruskal-Wallace Test
 Report Printed: 09-28-1998 10:56

Facility: D&A160 Sanitation, Inc.
 Address: P.O. Box 882
 City: Lewistown ST: MT Zip: 59457
 County: FERGUS
 Contact: Bill Spoya
 Phone: () -

Permit Type: Detection

Constituent: TClFlMe Trichlorofluoromethane

CAS Number: 75-69-4
 MCL: 0.000 ug/l
 ACL: 0.000 ug/l
 Detect Limit: 1.000 ug/l

Start Date: Aug 16 1995
 End Date: Jun 03 1999

Data Mode: Original

Background Wells

Well ID	N %ND	Max Value	Min Value	Mean	Std Dev
SIMW-1	4 0	0.49	0.33	0.42	0.07
SIP-2	2 0	1.40	0.32	0.86	0.76

Compliance Wells

Well ID	N %ND	Max Value	Min Value	Mean	Std Dev
SIMW-2	8 50	1.40	0.15	0.49	0.40
SIMW-3	7 71	1.40	0.17	0.58	0.38

Well ID	Date	Observation	Rank
SIMW-1	08/16/95	0.4900	18.0
SIMW-1	06/10/96	0.4000	16.0
SIMW-1	06/03/97	0.4700	17.0
SIMW-1	11/04/97	0.3300	15.0
SIP-2	11/26/96	0.3200	14.0
SIP-2	06/16/98	1.4000	20.0

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Background Rank Sum: 100.0

Background Rank Avg: 16.7

SIMW-2	08/16/95	0.5000	5.0
SIMW-2	06/10/96	0.1600	11.0
SIMW-2	10/22/96	0.1500	10.0
SIMW-2	06/03/97	0.5000	5.0
SIMW-2	06/03/97	0.5000	5.0
SIMW-2	11/04/97	0.2000	13.0
SIMW-2	06/16/98	1.4000	20.0
SIMW-2	06/16/98	0.5000	5.0

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Compliance Well Rank Sum: 74.0

Compliance Well Rank Avg: 9.3

SIMW-3	08/16/95	0.1700	12.0
SIMW-3	06/10/96	0.5000	5.0
SIMW-3	10/22/96	0.5000	5.0
SIMW-3	06/03/97	0.5000	5.0
SIMW-3	11/04/97	0.5000	5.0
SIMW-3	11/04/97	0.5000	5.0
SIMW-3	06/16/98	1.4000	20.0

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Compliance Well Rank Sum: 57.0

Compliance Well Rank Avg: 8.1

H Statistic: 7.1249

H Adjusted for Ties: 7.7270

Degrees of Freedom: 2

Chi-Squared: 5.9915

ZÁ/DF: 1.9600

* Indicates significant evidence of contamination

Well ID	Crit. Diff.	Rank Avg.	Background Rank Avg.	Difference
SIMW-2	6.5250	9.25	16.67	-7.42
SIMW-3	6.7218	8.14	16.67	-8.52

Kruskal-Wallace Test

Report Printed: 09-28-1998 10:57

Facility:D&A160

Sanitation, Inc.

Address:P.O. Box 882

City:Lewistown
County:FERGUS

ST:MT Zip:59457

Contact: Bill Spoya
Phone: () -

Permit Type: Detection

Constituent: SO4 dis Sulfate, dissolved

CAS Number: 14808-79-8

MCL: 0.000 mg/l

ACL: 0.000 mg/l

Detect Limit: 0.001 mg/l

Start Date: Aug 16 1995

End Date: Jun 03 1999

Data Mode: Original

Background Wells

Well ID	N	%ND	Max Value	Min Value	Mean	Std Dev
SIMW-1	3	0	95.00	81.00	89.33	7.37
SIP-2	1	0	95.00	95.00	95.00	0.00

Compliance Wells

Well ID	N	%ND	Max Value	Min Value	Mean	Std Dev
SIMW-2	7	0	224.00	195.00	207.00	9.87
SIMW-3	7	0	140.00	129.00	133.86	4.18

Well ID	Date	Observation	Rank
SIMW-1	08/16/95	95.0000	3.5
SIMW-1	06/03/97	92.0000	2.0
SIMW-1	11/04/97	81.0000	1.0
SIP-2	11/26/96	95.0000	3.5

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Background Rank Sum: 10.0

Background Rank Avg: 2.5

SIMW-2	08/16/95	224.0000	18.0
SIMW-2	06/10/96	195.0000	12.0
SIMW-2	10/22/96	214.0000	17.0
SIMW-2	06/03/97	202.0000	14.5
SIMW-2	11/04/97	211.0000	16.0
SIMW-2	06/16/98	201.0000	13.0
SIMW-2	06/16/98	202.0000	14.5

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Compliance Well Rank Sum: 105.0

Compliance Well Rank Avg: 15.0

SIMW-3	08/16/95	140.0000	11.0
SIMW-3	06/10/96	139.0000	10.0
SIMW-3	10/22/96	133.0000	8.0
SIMW-3	06/03/97	134.0000	9.0
SIMW-3	11/04/97	131.0000	6.5
SIMW-3	11/04/97	131.0000	6.5
SIMW-3	06/16/98	129.0000	5.0

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Compliance Well Rank Sum: 56.0

Compliance Well Rank Avg: 8.0

H Statistic: 14.8596

H Adjusted for Ties: 14.9058
 Degrees of Freedom: 2
 Chi-Squared: 5.9915
 Z²/DF: 1.9600

* Indicates significant evidence of contamination

Well ID	Crit.	Diff.	Rank Avg.	Background Rank	Avg. Difference
*SIMW-2	6.5005		15.00	2.50	12.50
SIMW-3	6.5005		8.00	2.50	5.50

Prediction Intervals

Report Printed: 09-28-1998 10:57

Facility:D&A160 Sanitation, Inc.

Address:P.O. Box 882

City:Lewistown
 County:FERGUS

ST:MT Zip:59457

Contact:Bill Spoya
 Phone:() -

Permit Type:Detection

Constituent:SO4 dis Sulfate, dissolved

CAS Number:14808-79-8

MCL: 0.000 mg/l

ACL: 0.000 mg/l

Detect Limit: 0.001 mg/l

Start Date:Aug 16 1995

End Date:Jun 03 1999

Data Mode:Original

Background Data

Well ID	Date	Observation
UNÄ	08/16/95	95000.0000
UNÄ	11/26/96	95000.0000
UNÄ	06/03/97	92000.0000
UNÄ	11/04/97	81000.0000

Summary Statistics

Observations: 4
 Mean: 90750.000
 Std Dev: 6652.067
 Shapiro-Wilk: 0.867

1% Critical Value: 0.687
5% Critical Value: 0.748

Future Data

Well:SIMW-2

Date	Observation
06/16/98	202000.0000

Summary Statistics

Observations: 1
Mean: 90750.000
Std Dev: 6652.067

Prediction Intervals

Significance Level:0.050000

Date Range	Observations	Mean	Interval
*06/16/98-06/30/98	1	202000.000	[0.0- 108252.641]

* Since the Mean for this period exceeds the upper prediction limit,
there is significant evidence of contamination.

Prediction Intervals

Report Printed: 09-28-1998 10:57

Facility:D&A160 Sanitation, Inc.

Address:P.O. Box 882

City:Lewistown ST:MT Zip:59457
County:FERGUS

Contact:Bill Spoya
Phone:() -

Permit Type:Detection

Constituent:SO4 dis Sulfate, dissolved

CAS Number:14808-79-8

MCL: 0.000 mg/l

ACL: 0.000 mg/l

Detect Limit: 0.001 mg/l

Start Date:Aug 16 1995

End Date:Jun 03 1999

Data Mode:Original

Background Data

Well ID	Date	Observation
SIMW-2	08/16/95	224000.0000

SIMW-2	06/10/96	195000.0000
SIMW-2	10/22/96	214000.0000
SIMW-2	06/03/97	202000.0000
SIMW-2	11/04/97	211000.0000

Summary Statistics

Observations:	5
Mean:	209200.000
Std Dev:	11166.916
Shapiro-Wilk:	0.912

Summary Statistics

Observations:	5
Mean:	209200.000
Std Dev:	11166.916

Summary Statistics

Summary Statistics

Date Range	Observations	Mean	Std Dev
01/16/89-06/03/97	2	209200.000	11166.916

* Since the Mean for this period exceeds the upper prediction limit, there is significant evidence of contamination.

Summary Statistics

Report Printed: 05-12-1998 10:37

Wallace, Wallace & Wallace, Inc.
 150 West 10th Street
 City: New York
 Country: USA
 State: NY Zip: 10011
 Phone: 212-333-1111

Wallace, Wallace & Wallace, Inc.
 Phone: 212-333-1111

Summary Statistics

Summary Statistics

01/16/89-06/03/97	2	209200.000	11166.916
06/03/97-11/04/97	3	209200.000	11166.916

01/16/89-06/03/97
 06/03/97-11/04/97

Summary Statistics

Summary Statistics

01/16/89-06/03/97	2	209200.000	11166.916
06/03/97-11/04/97	3	209200.000	11166.916

1% Critical Value: 0.686
5% Critical Value: 0.762

Future Data

Well:SIMW-2

Date	Observation
06/16/98	201000.0000
06/16/98	202000.0000

Summary Statistics

Observations: 2
Mean: 209200.000
Std Dev: 11166.916

Prediction Intervals

Significance Level:0.050000

Date Range	Observations	Mean	Interval
06/16/98-06/30/98	2	201500.000	[0.0- 229117.656]

* Since the Mean for this period exceeds the upper prediction limit,
there is significant evidence of contamination.

Kruskal-Wallace Test

Report Printed: 09-28-1998 10:57

Facility:D&A160 Sanitation, Inc.

Address:P.O. Box 882

City:Lewistown ST:MT Zip:59457
County:FERGUS

Contact:Bill Spoya
Phone:() -

Permit Type:Detection

Constituent:Chld dis Chloride, dissolved

CAS Number:16887-00-6

MCL: 0.000 mg/l

ACL: 0.000 mg/l

Detect Limit: 0.001 mg/l

Start Date:Aug 16 1995

End Date:Jun 03 1999

Data Mode:Original

Background Wells

Well ID	N %ND	Max Value	Min Value	Mean	Std Dev
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SIMW-1	3	0	26.00	24.00	25.00	1.00
SIP-2	1	0	28.00	28.00	28.00	0.00

Compliance Wells

Well ID	N	%ND	Max Value	Min Value	Mean	Std Dev
SIMW-2	7	0	63.00	47.00	57.14	5.34
SIMW-3	7	0	34.00	23.00	29.71	3.86

Well ID	Date	Observation	Rank
SIMW-1	08/16/95	26.0000	4.0
SIMW-1	06/03/97	25.0000	3.0
SIMW-1	11/04/97	24.0000	2.0
SIP-2	11/26/96	28.0000	6.0

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Background Rank Sum: 15.0

Background Rank Avg: 3.8

SIMW-2	08/16/95	55.0000	13.0
SIMW-2	06/10/96	47.0000	12.0
SIMW-2	10/22/96	62.0000	17.0
SIMW-2	06/03/97	63.0000	18.0
SIMW-2	11/04/97	58.0000	15.0
SIMW-2	06/16/98	56.0000	14.0
SIMW-2	06/16/98	59.0000	16.0

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Compliance Well Rank Sum: 105.0

Compliance Well Rank Avg: 15.0

SIMW-3	08/16/95	34.0000	10.5
SIMW-3	06/10/96	30.0000	8.0
SIMW-3	10/22/96	34.0000	10.5
SIMW-3	06/03/97	27.0000	5.0
SIMW-3	11/04/97	30.0000	8.0
SIMW-3	11/04/97	30.0000	8.0
SIMW-3	06/16/98	23.0000	1.0

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Compliance Well Rank Sum: 51.0

Compliance Well Rank Avg: 7.3

H Statistic: 13.2744

H Adjusted for Ties: 13.3433

Degrees of Freedom: 2

Chi-Squared: 5.9915

ZA/DF: 1.9600

* Indicates significant evidence of contamination

Well ID	Crit.	Diff.	Rank Avg.	Background Rank Avg.	Difference
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*SIMW-2	6.5005	15.00	3.75	11.25	
SIMW-3	6.5005	7.29	3.75	3.54	

Prediction Intervals

Report Printed: 09-28-1998 10:58

Facility:D&A160 Sanitation, Inc.

Address:P.O. Box 882

City:Lewistown
County:FERGUS

ST:MT Zip:59457

Contact: Bill Spoya
Phone: () -

Permit Type: Detection

Constituent: Chld dis Chloride, dissolved

CAS Number: 16887-00-6

MCL: 0.000 mg/l

ACL: 0.000 mg/l

Detect Limit: 0.001 mg/l

Start Date: Aug 16 1995

End Date: Jun 03 1999

Data Mode: Original

Background Data

Well ID	Date	Observation
UNA	08/16/95	26000.0000
UNA	11/26/96	28000.0000
UNA	06/03/97	25000.0000
UNA	11/04/97	24000.0000

Summary Statistics

Observations: 4
Mean: 25750.000
Std Dev: 1707.825
Shapiro-Wilk: 1.091

1% Critical Value: 0.687
5% Critical Value: 0.748

Future Data

Well:SIMW-2

Date	Observation
06/16/98	59000.0000

Summary Statistics

Observations: 1
Mean: 25750.000
Std Dev: 1707.825

Prediction Intervals

Significance Level:0.050000

Date Range	Observations	Mean	Interval
*06/16/98-06/30/98	1	59000.000	[0.0- 30243.559]

* Since the Mean for this period exceeds the upper prediction limit,
there is significant evidence of contamination.

Prediction Intervals

Report Printed: 09-28-1998 10:58

Facility:D&A160 Sanitation, Inc.

Address:P.O. Box 882

City:Lewistown
County:FERGUS

ST:MT Zip:59457

Contact:Bill Spoya
Phone:() -

Permit Type:Detection

Constituent:Chld dis Chloride, dissolved

CAS Number:16887-00-6

MCL: 0.000 mg/l
ACL: 0.000 mg/l
Detect Limit: 0.001 mg/l

Start Date:Aug 16 1995

End Date:Jun 03 1999

Data Mode:Original

Background Data

Well ID	Date	Observation
SIMW-2	08/16/95	55000.0000

SIMW-2	06/10/96	47000.0000
SIMW-2	10/22/96	62000.0000
SIMW-2	06/03/97	63000.0000
SIMW-2	11/04/97	58000.0000

Summary Statistics

Observations: 5
 Mean: 57000.000
 Std Dev: 6442.049
 Shapiro-Wilk: 0.841

1% Critical Value: 0.686
5% Critical Value: 0.762

Future Data

Well:SIMW-2

Date	Observation
06/16/98	56000.0000
06/16/98	59000.0000

Summary Statistics

Observations: 2
Mean: 57000.000
Std Dev: 6442.049

Prediction Intervals

Significance Level:0.050000

Date Range	Observations	Mean	Interval
06/16/98-06/30/98	2	57500.000	[0.0- 68490.242]

* Since the Mean for this period exceeds the upper prediction limit,
there is significant evidence of contamination.

Kruskal-Wallace Test

Report Printed: 09-28-1998 10:58

Facility:D&A160 Sanitation, Inc.

Address:P.O. Box 882

City:Lewistown ST:MT Zip:59457
County:FERGUS

Contact:Bill Spoya
Phone:() -

Permit Type:Detection

Constituent:NO3/NO2 Nitrate,Nitrite

CAS Number: - -

MCL: 0.000 mg/l

ACL: 0.000 mg/l

Detect Limit: 0.000 mg/l

Start Date:Aug 16 1995

End Date:Jun 03 1999

Data Mode:Original

Background Wells

Well ID	N %ND	Max Value	Min Value	Mean	Std Dev
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SIMW-1	4	0	5.56	3.74	4.51	0.77
SIP-2	1	0	1.79	1.79	1.79	0.00

Compliance Wells

Well ID	N	%ND	Max Value	Min Value	Mean	Std Dev
SIMW-2	7	0	4.18	2.11	3.04	0.89
SIMW-3	7	0	12.20	8.96	9.62	1.15

Well ID	Date	Observation	Rank
SIMW-1	08/16/95	4.4900	11.0
SIMW-1	06/10/96	4.2400	10.0
SIMW-1	06/03/97	5.5600	12.0
SIMW-1	11/04/97	3.7400	6.0
SIP-2	11/26/96	1.7900	1.0

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Background Rank Sum: 40.0

Background Rank Avg: 8.0

SIMW-2	08/16/95	3.7800	7.0
SIMW-2	06/10/96	4.1800	9.0
SIMW-2	10/22/96	2.6000	5.0
SIMW-2	06/03/97	2.1100	2.0
SIMW-2	11/04/97	3.9500	8.0
SIMW-2	06/16/98	2.3200	3.0
SIMW-2	06/16/98	2.3700	4.0

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Compliance Well Rank Sum: 38.0

Compliance Well Rank Avg: 5.4

SIMW-3	08/16/95	8.9600	13.0
SIMW-3	06/10/96	9.2500	17.0
SIMW-3	10/22/96	9.0900	15.0
SIMW-3	06/03/97	9.0800	14.0
SIMW-3	11/04/97	9.5300	18.0
SIMW-3	11/04/97	9.2000	16.0
SIMW-3	06/16/98	12.2000	19.0

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Compliance Well Rank Sum: 112.0

Compliance Well Rank Avg: 16.0

H Statistic: 13.2090

H Adjusted for Ties: 13.2090

Degrees of Freedom: 2

Chi-Squared: 5.9915

ZA/DF: 1.9600

* Indicates significant evidence of contamination

Well ID	Crit. Diff.	Rank Avg.	Background Rank Avg.	Difference
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SIMW-2	6.3898	5.43	8.00	-2.57
*SIMW-3	6.3898	16.00	8.00	8.00

Prediction Intervals

Report Printed: 09-28-1998 10:59

Facility:D&A160 Sanitation, Inc.

Address:P.O. Box 882

City:Lewistown
County:FERGUS

ST:MT Zip:59457

Contact: Bill Spoya
Phone: () -

Permit Type: Detection

Constituent: NO3/NO2 Nitrate, Nitrite

CAS Number: - -
MCL: 0.000 mg/l
ACL: 0.000 mg/l
Detect Limit: 0.000 mg/l

Start Date: Aug 16 1995
End Date: Jun 03 1999

Data Mode: Original

Background Data

Well ID	Date	Observation
UNA	08/16/95	4490.0000
UNA	06/10/96	4240.0000
UNA	11/26/96	1790.0000
UNA	06/03/97	5560.0000
UNA	11/04/97	3740.0000

Summary Statistics

Observations: 5
Mean: 3964.000
Std Dev: 1385.327
Shapiro-Wilk: 0.932

1% Critical Value: 0.686
5% Critical Value: 0.762

Future Data

Well:SIMW-3

Date	Observation
06/16/98	12200.0000

Summary Statistics

Observations:	1
Mean:	3964.000
Std Dev:	1385.327

Prediction Intervals

Significance Level:0.050000

Date Range	Observations	Mean	Interval
*06/16/98-06/30/98	1	12200.000	[0.0- 7199.183]

* Since the Mean for this period exceeds the upper prediction limit,
there is significant evidence of contamination.

Kruskal-Wallace Test

Report Printed: 09-28-1998 10:59

Facility:D&A160 Sanitation, Inc.

Address:P.O. Box 882

City:Lewistown ST:MT Zip:59457
County:FERGUS

Contact:Bill Spoya
Phone:() -

Permit Type:Detection

Constituent:Cond Specific Conductivity

CAS Number: - -
MCL: 0.000 umhos/cm
ACL: 0.000 umhos/cm
Detect Limit: 1.000 umhos/cm

Start Date:Aug 16 1995
End Date:Jun 03 1999

Data Mode:Original

Background Wells

Well ID	N	%ND	Max Value	Min Value	Mean	Std Dev
SIMW-1	3	0	958.00	751.00	831.67	110.80

SIP-2	1	0	822.00	822.00	822.00	0.00
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Compliance Wells

Well ID	N	%ND	Max Value	Min Value	Mean	Std Dev
SIMW-2	7	0	1480.00	1040.00	1184.29	139.15
SIMW-3	7	0	893.00	683.00	757.86	67.26

Well ID	Date	Observation	Rank
SIMW-1	08/16/95	958.0000	11.0
SIMW-1	06/03/97	786.0000	8.0
SIMW-1	11/04/97	751.0000	5.0
SIP-2	11/26/96	822.0000	9.0

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Background Rank Sum: 33.0

Background Rank Avg: 8.3

SIMW-2	08/16/95	1480.0000	18.0
SIMW-2	06/10/96	1180.0000	16.5
SIMW-2	10/22/96	1180.0000	16.5
SIMW-2	06/03/97	1040.0000	12.0
SIMW-2	11/04/97	1110.0000	13.0
SIMW-2	06/16/98	1150.0000	14.5
SIMW-2	06/16/98	1150.0000	14.5

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Compliance Well Rank Sum: 105.0

Compliance Well Rank Avg: 15.0

SIMW-3	08/16/95	893.0000	10.0
SIMW-3	06/10/96	750.0000	4.0
SIMW-3	10/22/96	706.0000	2.0
SIMW-3	06/03/97	683.0000	1.0
SIMW-3	11/04/97	767.0000	6.5
SIMW-3	11/04/97	767.0000	6.5
SIMW-3	06/16/98	739.0000	3.0

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Compliance Well Rank Sum: 33.0

Compliance Well Rank Avg: 4.7

H Statistic: 13.2744

H Adjusted for Ties: 13.3157

Degrees of Freedom: 2

Chi-Squared: 5.9915

ZÁ/DF: 1.9600

* Indicates significant evidence of contamination

Well ID	Crit. Diff.	Rank Avg.	Background Rank Avg.	Difference
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*SIMW-2	6.5005	15.00	8.25	6.75
SIMW-3	6.5005	4.71	8.25	-3.54

Prediction Intervals

Report Printed: 09-28-1998 11:00

Facility:D&A160 Sanitation, Inc.

Address:P.O. Box 882

City:Lewistown

ST:MT Zip:59457

County:FERGUS

Contact:Bill Spoya

Phone: () -

Permit Type: Detection

Constituent: Cond Specific Conductivity

CAS Number: - -

MCL: 0.000 umhos/cm

ACL: 0.000 umhos/cm

Detect Limit: 1.000 umhos/cm

Start Date: Aug 16 1995

End Date: Jun 03 1999

Data Mode: Original

Background Data

Well ID	Date	Observation
UNA	08/16/95	958.0000
UNA	11/26/96	822.0000
UNA	06/03/97	786.0000
UNA	11/04/97	751.0000

Summary Statistics

Observations:	4
Mean:	829.250
Std Dev:	90.596
Shapiro-Wilk:	1.003

1% Critical Value: 0.687
5% Critical Value: 0.748

Future Data

Well:SIMW-2

Date	Observation
06/16/98	1150.0000

Summary Statistics

Observations: 1
Mean: 829.250
Std Dev: 90.596

Prediction Intervals

Significance Level:0.050000

Date Range	Observations	Mean	Interval
*06/16/98-06/30/98	1	1150.000 [0.0-	1067.622]

* Since the Mean for this period exceeds the upper prediction limit,
there is significant evidence of contamination.

Prediction Intervals

Report Printed: 09-28-1998 11:00

Facility:D&A160 Sanitation, Inc.

Address:P.O. Box 882

City:Lewistown ST:MT Zip:59457
County:FERGUS

Contact:Bill Spoya
Phone:() -

Permit Type:Detection

Constituent:Cond Specific Conductivity

CAS Number: - -
MCL: 0.000 umhos/cm
ACL: 0.000 umhos/cm
Detect Limit: 1.000 umhos/cm

Start Date:Aug 16 1995
End Date:Jun 03 1999

Data Mode:Original

Background Data

Well ID	Date	Observation
SIMW-2	08/16/95	1480.0000

SIMW-2	06/10/96	1180.0000
SIMW-2	10/22/96	1180.0000
SIMW-2	06/03/97	1040.0000
SIMW-2	11/04/97	1110.0000

Summary Data

Summary Statistics

Observations:	5
Mean:	1198.000
Std Dev:	167.988
Shapiro-Wilk:	0.852

Summary Statistics

Observations:	5
Mean:	1198.000
Std Dev:	167.988

Confidence Intervals

Significance Level: 0.05000

Date Range	Observations	Mean	Interval
06/10/96-06/10/96	1	1180.000	1180.000

* Since the mean for this period exceeds the upper prediction limit, there is strong evidence of contamination.

Statistical Analysis Test

Report Printed: 06/11/98 11:00

Facility: Dallas

Sanitation, Inc.

Address: P.O. Box 882

City: Little Rock

ST MT 117-55457

County: TRULS

Contact: Bill Speys

Phone: /

Serial Type Detection

Concentration: 0.01 mg/l

USE: 7437-55-4

0.001 mg/l

0.005 mg/l

Detect Limit: 0.001 mg/l

Start Date: 12/19/95

End Date: Jun 03/1998

Serial Type Detection

Background Wells

Well ID	U Value	Max Value	Min Value	Start	End Date
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1% Critical Value: 0.686
5% Critical Value: 0.762

Future Data

Well:SIMW-2

Date	Observation
06/16/98	1150.0000
06/16/98	1150.0000

Summary Statistics

Observations: 2
Mean: 1198.000
Std Dev: 167.988

Prediction Intervals

Significance Level:0.050000

Date Range	Observations	Mean	Interval
06/16/98-06/30/98	2	1150.000	[0.0- 1497.629]

* Since the Mean for this period exceeds the upper prediction limit,
there is significant evidence of contamination.

Kruskal-Wallace Test

Report Printed: 09-28-1998 11:00

Facility:D&A160 Sanitation, Inc.

Address:P.O. Box 882

City:Lewistown ST:MT Zip:59457
County:FERGUS

Contact:Bill Spoya
Phone:() -

Permit Type:Detection

Constituent:Fe dis Iron, dissolved

CAS Number: 7439-89-6

MCL: 0.000 mg/l

ACL: 0.000 mg/l

Detect Limit: 0.003 mg/l

Start Date:Aug 16 1995

End Date:Jun 03 1999

Data Mode:Original

Background Wells

Well ID	N %ND	Max Value	Min Value	Mean	Std Dev
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SIMW-1	4	75	0.04	0.00	0.01	0.02
SIP-2	2	0	0.45	0.15	0.30	0.21

Compliance Wells

Well ID	N	%ND	Max Value	Min Value	Mean	Std Dev
SIMW-2	7	43	1.29	0.00	0.22	0.47
SIMW-3	7	57	0.24	0.00	0.05	0.09

Well ID	Date	Observation	Rank
SIMW-1	08/16/95	0.0015	5.5
SIMW-1	06/10/96	0.0015	5.5
SIMW-1	06/03/97	0.0400	12.0
SIMW-1	11/04/97	0.0015	5.5
SIP-2	11/26/96	0.1500	16.0
SIP-2	06/16/98	0.4500	19.0

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Background Rank Sum: 63.5

Background Rank Avg: 10.6

SIMW-2	08/16/95	0.0015	5.5
SIMW-2	06/10/96	0.0015	5.5
SIMW-2	10/22/96	1.2900	20.0
SIMW-2	06/03/97	0.1600	17.0
SIMW-2	11/04/97	0.0015	5.5
SIMW-2	06/16/98	0.0500	13.5
SIMW-2	06/16/98	0.0500	13.5

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Compliance Well Rank Sum: 80.5

Compliance Well Rank Avg: 11.5

SIMW-3	08/16/95	0.0015	5.5
SIMW-3	06/10/96	0.1000	15.0
SIMW-3	10/22/96	0.0300	11.0
SIMW-3	06/03/97	0.0015	5.5
SIMW-3	11/04/97	0.0015	5.5
SIMW-3	11/04/97	0.0015	5.5
SIMW-3	06/16/98	0.2400	18.0

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Compliance Well Rank Sum: 66.0

Compliance Well Rank Avg: 9.4

H Statistic: 0.4308

H Adjusted for Ties: 0.4922

Degrees of Freedom: 2

Chi-Squared: 5.9915

ZÁ/DF: 1.9600

* Indicates significant evidence of contamination

Well ID	Crit.	Diff.	Rank Avg.	Background Rank Avg.	Difference
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SIMW-2	6.4510		11.50	10.58	0.92
SIMW-3	6.4510		9.43	10.58	-1.15

Kruskal-Wallace Test

Report Printed: 09-28-1998 11:00

Facility:D&A160 Sanitation, Inc.

Address:P.O. Box 882

City:Lewistown

ST:MT Zip:59457

County:FERGUS

Contact:Bill Spoya

Phone:() -

Permit Type:Detection

Constituent:Se dis Selenium, dissolved

CAS Number: 7782-49-2

MCL: 0.000 mg/l

ACL: 0.000 mg/l

Detect Limit: 0.001 mg/l

Start Date:Aug 16 1995

End Date:Jun 03 1999

Data Mode:Original

Background Wells

Well ID	N	%ND	Max Value	Min Value	Mean	Std Dev
SIMW-1	4	0	0.02	0.01	0.02	0.00
SIP-2	2	50	0.00	0.00	0.00	0.00

Compliance Wells

Well ID	N	%ND	Max Value	Min Value	Mean	Std Dev
SIMW-2	6	17	0.01	0.00	0.01	0.00
SIMW-3	7	14	0.02	0.00	0.02	0.01

Well ID	Date	Observation	Rank
SIMW-1	08/16/95	0.0170	12.0
SIMW-1	06/10/96	0.0160	11.0
SIMW-1	06/03/97	0.0140	9.5
SIMW-1	11/04/97	0.0190	14.0
SIP-2	11/26/96	0.0005	2.0
SIP-2	06/16/98	0.0050	4.5

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Background Rank Sum: 53.0

Background Rank Avg: 8.8

SIMW-2	08/16/95	0.0060	6.0
SIMW-2	06/10/96	0.0080	7.5
SIMW-2	10/22/96	0.0005	2.0
SIMW-2	06/03/97	0.0140	9.5
SIMW-2	11/04/97	0.0080	7.5
SIMW-2	06/16/98	0.0050	4.5

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Compliance Well Rank Sum: 37.0

Compliance Well Rank Avg: 6.2

SIMW-3	08/16/95	0.0210	16.0
SIMW-3	06/10/96	0.0220	17.0
SIMW-3	10/22/96	0.0190	14.0
SIMW-3	06/03/97	0.0005	2.0
SIMW-3	11/04/97	0.0230	18.5
SIMW-3	11/04/97	0.0230	18.5
SIMW-3	06/16/98	0.0190	14.0

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Compliance Well Rank Sum: 100.0

Compliance Well Rank Avg: 14.3

H Statistic: 7.1023
H Adjusted for Ties: 7.1715
Degrees of Freedom: 2
Chi-Squared: 5.9915
ZA/DF: 1.9600

* Indicates significant evidence of contamination

Well ID	Crit. Diff.	Rank Avg.	Background Rank Avg.	Difference
SIMW-2	6.3004	6.17	8.83	-2.67
SIMW-3	6.0712	14.29	8.83	5.45

Kruskal-Wallace Test

Report Printed: 09-28-1998 11:01

Facility:D&A160 Sanitation, Inc.

Address:P.O. Box 882

City:Lewistown ST:MT Zip:59457
County:FERGUS

Contact:Bill Spoya
Phone:() -

Permit Type:Detection

Constituent:Zn dis Zinc, dissolved

CAS Number: 7440-66-6

MCL: 0.000 mg/l

ACL: 0.000 mg/l

Detect Limit: 0.010 mg/l

Start Date:Aug 16 1995

End Date:Jun 03 1999

Data Mode:Original

Background Wells

Well ID	N	%ND	Max Value	Min Value	Mean	Std Dev
SIMW-1	4	25	0.03	0.00	0.02	0.01
SIP-2	2	0	0.03	0.02	0.02	0.01

Compliance Wells

Well ID	N	%ND	Max Value	Min Value	Mean	Std Dev
SIMW-2	7	43	0.06	0.00	0.02	0.02
SIMW-3	7	71	0.03	0.00	0.01	0.01

Well ID	Date	Observation	Rank
SIMW-1	08/16/95	0.0050	5.0
SIMW-1	06/10/96	0.0200	13.0

SIMW-1	06/03/97	0.0300	17.5
SIMW-1	11/04/97	0.0200	13.0
SIP-2	11/26/96	0.0200	13.0
SIP-2	06/16/98	0.0300	17.5

aaaaaaaaaaaa

ASSOCIATES, INC.

Landfill Ground-Water Monitoring Field Report

Project Name/Number Silver Lake Well Number SIP-2

Sample(s) 85

Date 6/16/98 Time 4:30

Conditions Light Rain 42° F - Wind NWS to SE

Field Data Table (circle) 1 2

Depth to Water 55.13 Total Depth _____

Volume of Water Pumped 1.45 min @ 1.5 GPM

Temperature -#1 _____ -#2 _____ -#3 _____ -#4 _____

Conductivity -#1 _____ -#2 OFF - SCALE -#3 _____ -#4 _____

pH -#1 5.5 -#2 _____ -#3 _____ -#4 _____

Recovery: h _____ h _____ min _____

Sample Preservatives

1000 ml. H₂O w/ no preservative ✓
 250 ml w/ H₂SO₄ (yellow) _____
 250 ml w/ HNO₃ (red, filtered) ✓
 250 ml w/ NaOH (green) _____
 500 ml w/ no preservative _____
 50 ml. H₂O w/ HCl (blue) ✓

Comments (attach change of instrumentation information to this sheet if necessary)

DAMSCHEEN & ASSOCIATES, INC.
Landfill Ground-Water Monitoring Field Report

Project Name/Number SANITATION INC Well Number SIP-2

Sampler(s) BS

Date 6/16/98 Time 930

Conditions HEAVY RAIN 42° F NW WIND TO 25

Field Data:

Table (circle) (1) 2

Depth to Water 55.22 Total Depth _____

Volume of Water Purged 1 CASING - ~ 1 QT

Temperature--#1 _____ --#2 _____ --#3 _____ --#4 _____

Conductivity--#1 _____ --#2 OFF - SCALE --#3 _____ --#4 _____

pH--#1 6.15 --#2 _____ --#3 _____ --#4 _____

Recovery: h₁ _____ h₂ _____ time _____

Sample Preservatives:

1000 ml, 6, w/ no preservative N/A
250 ml w/ H₂SO₄ (yellow) _____
250 ml w/ HNO₃ (red), filtered X
250 ml w/ NaOH (green) _____
500 ml w/ no preservative _____
40 ml, 2, w/ HCl (blue) X

Comments (attach change of instrumentation information to this sheet if necessary):

Project Name/Number SAVATON INC Well Number 219-J

Sample(s) 82

Date 12/1/98 Time 1:30

Conditions Agree Rain 45° F Windy to SE

Field Data

Table (enter X)

Depth to Water 22.55 Total Depth

Volume of Water Pumped 1.02 gal

Temperature -41 -42 -43 -44

Conductivity -41 -42 -43 -44

pH -41 -42 -43 -44

Recovery 1.015

Recovery 1.015

Sample Preservation

1000 ml, 6 w/ no preservative

250 ml w/ H₂O (yellow)

250 ml w/ H₂O (red) X

250 ml w/ H₂O (green)

500 ml w/ no preservative

50 ml, 1 w/ HCl (blue) X

Comments (attach change of instrumentation information to this sheet if necessary)

DAMSCHEEN & ASSOCIATES, INC.
Landfill Ground-Water Monitoring Field Report

Project Name/Number SANITATION INC Well Number SIMW-2

Sampler(s) SIEMENS

Date 6/16/98 Time 1015

Conditions RAIN COLD WIND

Field Data:

Table (circle) (1) 2

Depth to Water 37.45 Total Depth _____

Volume of Water Purged ~ 2 GALLONS BAILED DRY

Temperature--#1 _____ --#2 _____ --#3 _____ --#4 _____

Conductivity--#1 _____ --#2 _____ --#3 _____ --#4 _____

pH--#1 _____ --#2 _____ --#3 _____ --#4 _____

Recovery: h₁ _____ h₂ _____ time _____

Sample Preservatives:

1000 ml, 6, w/ no preservative N/A

250 ml w/ H₂SO₄ (yellow) X

250 ml w/ HNO₃ (red), filtered /

250 ml w/ NaOH (green) /

500 ml w/ no preservative _____

40 ml, 2, w/ HCl (blue) _____

Comments (attach change of instrumentation information to this sheet if necessary):

pH/TEMP/SC METER FAILED

DANSCHE & ASSOCIATES, INC.
Leachfield Ground Water Monitoring Field Report

Project Name/Number Leachfield Twp Well Number 2100-1

Sample(s) 2100-1

Date 4/10/98 Time 10:15

Conditions Clear, Cool, Windy

Field Data: Table (attach) 1

Depth to Water 52.42 Total Depth _____

Volume of Water Pumped 1.5 Gaining/Losing Gain

Temperature (°F) _____

Conductivity (µmhos/cm) _____

pH (°F) _____

Resistivity (ohm-cm) _____

Sample Preservation
 1000 ml, 6 w/ no preservative 4/10
 250 ml w/ HNO₃ (yellow) _____
 250 ml w/ HNO₃ (red, filtered) _____
 250 ml w/ NaOH (green) _____
 250 ml w/ no preservative _____
 40 ml, 2 w/ HCl (blue) _____

Comments (attach change of representative information to this sheet if necessary)

4/10/98 - water table is

DAMSCHEEN & ASSOCIATES, INC.
Landfill Ground-Water Monitoring Field Report

Project Name/Number SANITATOR INC Well Number Slmw-3

Sampler(s) SIEGMUND

Date 6/16/98 Time 1115

Conditions _____

Field Data:

Table (circle) (1) 2

Depth to Water 33.18 Total Depth _____

Volume of Water Purged ~ 2 GAC Bailed Dry

Temperature--#1 _____ --#2 _____ --#3 _____ --#4 _____

Conductivity--#1 _____ --#2 _____ --#3 _____ --#4 _____

pH--#1 _____ --#2 _____ --#3 _____ --#4 _____

Recovery: h₁ _____ h₂ _____ time _____

Sample Preservatives:

1000 ml, 6, w/ no preservative N/A

250 ml w/ H₂SO₄ (yellow) X

250 ml w/ HNO₃ (red), filtered |

250 ml w/ NaOH (green) |

500 ml w/ no preservative |

40 ml, 2, w/ HCl (blue) |

Comments (attach change of instrumentation information to this sheet if necessary):

pH/sc/t METER SWAPPED

DAMSCHEIN & ASSOCIATES, INC.
Landfill Ground-Water Monitoring Field Report

Project Name/Number: 2-011010-0001 Well Number: 2-011010-0001

Sample(s): 2-011010-0001

Date: 8/21/92 Time: 11:15

Container: _____

Field Data: _____

Depth to Water: 22.12 Total Depth: _____

Volume of Water Pumped: 5 Cor: 8 Bar: 2

Temperature: 61 62 63 64

Conductivity: 61 62 63 64

pH: 61 62 63 64

Recovery: 61 62 63 64

Sample Preservation

1000 ml. E. w/ no preservative	<u>1-A</u>
250 ml. w/ H ₂ SO ₄ (yellow)	<u>2</u>
250 ml. w/ HNO ₃ (red)	<u>3</u>
250 ml. w/ NaOH (green)	<u>4</u>
500 ml. w/ no preservative	<u>5</u>
40 ml. E. w/ HCl (blue)	<u>6</u>

Comments (attach change of instrumentation information to this sheet if necessary):

8/25/92 2-011010-0001

**ENERGY LABORATORIES, INC.**P.O. BOX 30916 • 1120 SOUTH 27TH STREET • BILLINGS, MT 59107-0916 • PHONE (406) 252-6325
FAX (406) 252-6069 • 1-800-735-4489 • E-MAIL eli@energylab.com**LABORATORY REPORT**

Page: 1

To : Damschen & Associates, Inc.
Address : Bruce Siegmund
P.O. Box 4817
Helena, MT 59604-4817Lab No. : 98-40867 fs
Date : 7/10/98WATER ANALYSIS REPORT
Sanitation Inc., Landfill
SIP-2Sample Date : 6/16/98
Sample Time : 0930
Sample Received : 6/22/98

Constituents	Results	Units	Re-	Ref.	Method	--Analysis--		By
			marks			Date	Time	
Antimony, Dissolved	<0.05	mg/l	U	EPA	200.8	6/25/98	1557	LH
Arsenic, Dissolved	<0.005	mg/l	U	EPA	200.8	6/25/98	1557	LH
Barium, Dissolved	0.1	mg/l		EPA	200.7	6/23/98	1431	RLH
Beryllium, Dissolved	<0.001	mg/l	J1	EPA	200.7	6/23/98	1431	RLH
Cadmium, Dissolved	<0.001	mg/l	J2	EPA	200.8	6/25/98	1557	LH
Chromium, Dissolved	<0.01	mg/l	U	EPA	200.7	6/23/98	1431	RLH
Cobalt, Dissolved	<0.01	mg/l	J3	EPA	200.7	6/23/98	1431	RLH
Copper, Dissolved	0.02	mg/l		EPA	200.7	6/23/98	1431	RLH
Iron, Dissolved	0.45	mg/l		EPA	200.7	6/23/98	1431	RLH
Lead, Dissolved	0.02	mg/l		EPA	200.8	6/25/98	1557	LH
Mercury, Dissolved	<0.001	mg/l	U	EPA	200.8	6/25/98	1557	LH
Nickel, Dissolved	<0.01	mg/l	U	EPA	200.8	6/25/98	1557	LH
Selenium, Dissolved	0.005	mg/l		EPA	200.8	6/25/98	1557	LH
Silver, Dissolved	<0.005	mg/l	U	EPA	200.8	6/25/98	1557	LH
Thallium, Dissolved	<0.1	mg/l	U	EPA	200.8	6/25/98	1557	LH
Vanadium, Dissolved	<0.1	mg/l	U	EPA	200.7	6/23/98	1431	RLH
Zinc, Dissolved	0.03	mg/l		EPA	200.7	6/23/98	1431	RLH

- J1 Present but less than the practical quantitation limit. The estimated value is 0.0005.
- J2 Present but less than the practical quantitation limit. The estimated value is 0.0008.
- J3 Present but less than the practical quantitation limit. The estimated value is 0.007.
- U Indicates the parameter was analyzed but not detected.



ENERGY LABORATORIES, INC.

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FAX (406) 252-6069 • 1-800-735-4489 • E-MAIL cl@energylab.com

Client: Damschen and Associates, Inc.
Date Sampled: 16-JUN-98 09:30
Date Received: 22-JUN-98
Analysis Date: 26-JUN-1998 20:49
Project Info: Sanitation Inc. Landfill
Sample Info: SIP-2

Lab No.: 98-40867
Report Date: 07/02/98 16:23
Extraction Method: EPA 5030
Sample Matrix: WATER; pH= < 2

EPA METHOD 8260A: VOLATILE ORGANICS ANALYSIS REPORT

CONCENTRATION UNITS = ug/L (ppb)			
COMPOUNDS	CAS NO.	RESULT	QUALIFIER
Acetone	67-64-1	<50	U
Acrylonitrile	107-13-1	<20	U
Benzene	71-43-2	<1.0	U
Bromochloromethane	74-97-5	<1.0	U
Bromodichloromethane	75-27-4	<1.0	U
Bromoform	75-25-2	<1.0	U
Bromomethane	74-83-9	<1.0	U
Carbon disulfide	75-15-0	<1.0	U
Carbon tetrachloride	56-23-5	<1.0	U
Chlorobenzene	108-90-7	<1.0	U
Chloroethane	75-00-3	<1.0	U
Chloroform	67-66-3	<1.0	U
Chloromethane	74-87-3	<1.0	U
Dibromochloromethane	124-48-1	<1.0	U
1,2-Dibromo-3-chloropropane	96-12-8	<1.0	U
1,2-Dibromoethane	106-93-4	<1.0	U
Dibromomethane	74-95-3	<1.0	U
1,2-Dichlorobenzene	95-50-1	<1.0	U
1,4-Dichlorobenzene	106-46-7	<1.0	U
trans-1,4-Dichloro-2-butene	110-57-6	<2.0	U
Dichlorodifluoromethane	75-71-8	1.8	
1,1-Dichloroethane	75-34-3	<1.0	U
1,2-Dichloroethane	107-06-2	<1.0	U
1,1-Dichloroethene	75-35-4	<1.0	U
cis-1,2-Dichloroethene	156-59-2	<1.0	U
trans-1,2-Dichloroethene	156-60-5	<1.0	U
1,2-Dichloropropane	78-87-5	<1.0	U
cis-1,3-Dichloropropene	10061-01-5	<1.0	U
trans-1,3-Dichloropropene	10061-02-6	<1.0	U
Ethyl benzene	100-41-4	<1.0	U
2-Hexanone	591-78-6	<20	U
Iodomethane	74-88-4	<1.0	U
Methyl ethyl ketone	78-93-3	<20	U
Methyl isobutyl ketone	108-10-1	<20	U
Methylene chloride	75-09-2	<1.0	U
Styrene	100-42-5	<1.0	U
1,1,1,2-Tetrachloroethane	630-20-6	<1.0	U
1,1,2,2-Tetrachloroethane	79-34-5	<1.0	U
Tetrachloroethene	127-18-4	<1.0	U
Toluene	108-88-3	<1.0	U
1,1,1-Trichloroethane	71-55-6	<1.0	U
1,1,2-Trichloroethane	79-00-5	<1.0	U
Trichloroethene	79-01-6	<1.0	U
Trichlorofluoromethane	75-69-4	1.4	
1,2,3-Trichloropropane	96-18-4	<1.0	U
Vinyl acetate	108-05-4	<1.0	U
Vinyl chloride	75-01-4	<1.0	U
m+p-Xylenes	108383/106423	<1.0	U
o-Xylene	95-47-6	<1.0	U

SURROGATE RECOVERY REPORT

Surrogate Compound	Added-ug/L	Measured-ug/L	%Rec	QC Limits
1,2-Dichloroethane d4	10.0	10.0	100	80--120
Toluene d8	10.0	8.19	82	80--120
p-Bromofluorobenzene	10.0	10.6	106	80--120

QUALIFIER CODE EXPLANATIONS AND NOTES:

U= Indicates compound was analyzed for but not detected.

REPORT COMMENTS: None

Analyst: THC

Reviewing Supervisor: CAF

/chem/IONTAP2.i/vc062698.b/9840867a.d

**ENERGY LABORATORIES, INC.**P.O. BOX 30916 • 1120 SOUTH 27TH STREET • BILLINGS, MT 59107-0916 • PHONE (406) 252-6325
FAX (406) 252-6069 • 1-800-735-4489 • E-MAIL eli@energylab.com**LABORATORY REPORT**

Page: 1

To : Damschen & Associates, Inc.
Address : Bruce Siegmund
P.O. Box 4817
Helena, MT 59604-4817Lab No. : 98-40864 fs
Date : 7/10/98**WATER ANALYSIS REPORT**
Sanitation Inc., Landfill
SIMW-2Sample Date : 6/16/98
Sample Time : 1015
Sample Received : 6/22/98

Constituents	Results	Units	Re- marks	Ref.	Method	--Analysis--		By
						Date	Time	
Sulfate	201	mg/l		EPA	300.0	6/24/98	0823	SKW
Chloride	56	mg/l		EPA	300.0	6/24/98	0823	SKW
Conductivity, @ 25 degrees C	1150	µmhos/cm		EPA	120.1	6/22/98	1838	QED
pH @ 25 degrees C	7.8	s.u.		EPA	150.1	6/22/98	1838	QED
Nitrate plus Nitrite as N	2.32	mg/l		EPA	353.2	6/25/98	1050	BAS
Chemical Oxygen Demand	2	mg/l		EPA	410.4	6/30/98	1300	BS
Cyanide, Total	<0.005	mg/l	U	EPA	335.3	6/23/98	0800	ND
Antimony, Dissolved	<0.05	mg/l	U	EPA	200.8	6/25/98	1532	LH
Arsenic, Dissolved	<0.005	mg/l	U	EPA	200.8	6/25/98	1532	LH
Barium, Dissolved	<0.1	mg/l	U	EPA	200.7	6/23/98	1421	RLH
Beryllium, Dissolved	<0.001	mg/l	U	EPA	200.7	6/23/98	1421	RLH
Cadmium, Dissolved	<0.001	mg/l	U	EPA	200.8	6/25/98	1532	LH
Chromium, Dissolved	<0.01	mg/l	U	EPA	200.7	6/23/98	1421	RLH
Cobalt, Dissolved	0.01	mg/l		EPA	200.7	6/23/98	1421	RLH
Copper, Dissolved	<0.01(0.005)	mg/l	J	EPA	200.7	6/23/98	1421	RLH
Iron, Dissolved	0.05	mg/l		EPA	200.7	6/23/98	1421	RLH
Lead, Dissolved	<0.01	mg/l	U	EPA	200.8	6/25/98	1532	LH
Mercury, Dissolved	<0.001	mg/l	U	EPA	200.8	6/25/98	1532	LH
Nickel, Dissolved	<0.01	mg/l	U	EPA	200.8	6/25/98	1532	LH
Selenium, Dissolved	0.005	mg/l		EPA	200.8	6/25/98	1532	LH
Silver, Dissolved	<0.005	mg/l	U	EPA	200.8	6/25/98	1532	LH
Thallium, Dissolved	<0.1	mg/l	U	EPA	200.8	6/25/98	1532	LH
Vanadium, Dissolved	<0.1	mg/l	U	EPA	200.7	6/23/98	1421	RLH
Zinc, Dissolved	0.02	mg/l		EPA	200.7	6/23/98	1421	RLH

J Present but less than the practical quantitation limit. The value in parentheses is estimated.

U Indicates the parameter was analyzed but not detected.



ENERGY LABORATORIES, INC.

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JUL 16 1998

DAMSCHEN & ASSOCIATES

Client: Damschen and Associates, Inc.
Date Sampled: 16-JUN-98 10:15
Date Received: 22-JUN-98
Analysis Date: 26-JUN-1998 18:45
Project Info: Sanitation Inc. Landfill
Sample Info: SIMW-2

Lab No.: 98-40864
Report Date: 07/02/98 16:23
Extraction Method: EPA 5030
Sample Matrix: WATER; pH= < 2

EPA METHOD 8260A: VOLATILE ORGANICS ANALYSIS REPORT

CONCENTRATION UNITS - ug/L (ppb)			
COMPOUNDS	CAS NO.	RESULT	QUALIFIER
Acetone	67-64-1	<50	U
Acrylonitrile	107-13-1	<20	U
Benzene	71-43-2	<1.0	U
Bromochloromethane	74-97-5	<1.0	U
Bromodichloromethane	75-27-4	<1.0	U
Bromoform	75-25-2	<1.0	U
Bromomethane	74-83-9	<1.0	U
Carbon disulfide	75-15-0	<1.0	U
Carbon tetrachloride	56-23-5	<1.0	U
Chlorobenzene	108-90-7	<1.0	U
Chloroethane	75-00-3	<1.0	U
Chloroform	67-66-3	<1.0	U
Chloromethane	74-87-3	<1.0	U
Dibromochloromethane	124-48-1	<1.0	U
1,2-Dibromo-3-chloropropane	96-12-8	<1.0	U
1,2-Dibromoethane	106-93-4	<1.0	U
Dibromomethane	74-95-3	<1.0	U
1,2-Dichlorobenzene	95-50-1	<1.0	U
1,4-Dichlorobenzene	106-46-7	<1.0	U
trans-1,4-Dichloro-2-butene	110-57-6	<2.0	U
Dichlorodifluoromethane	75-71-8	<1.0	U
1,1-Dichloroethane	75-34-3	<1.0	U
1,2-Dichloroethane	107-06-2	<1.0	U
1,1-Dichloroethene	75-35-4	<1.0	U
cis-1,2-Dichloroethene	156-59-2	<1.0	U
trans-1,2-Dichloroethene	156-60-5	<1.0	U
1,2-Dichloropropane	78-87-5	<1.0	U
cis-1,3-Dichloropropene	10061-01-5	<1.0	U
trans-1,3-Dichloropropene	10061-02-6	<1.0	U
Ethyl benzene	100-41-4	<1.0	U
2-Hexanone	591-78-6	<20	U
Iodomethane	74-88-4	<1.0	U
Methyl ethyl ketone	78-93-3	<20	U
Methyl isobutyl ketone	108-10-1	<20	U
Methylene chloride	75-09-2	<1.0	U
Styrene	100-42-5	<1.0	U
1,1,1,2-Tetrachloroethane	630-20-6	<1.0	U
1,1,2,2-Tetrachloroethane	79-34-5	<1.0	U
Tetrachloroethene	127-18-4	<1.0	U
Toluene	108-88-3	<1.0	U
1,1,1-Trichloroethane	71-55-6	<1.0	U
1,1,2-Trichloroethane	79-00-5	<1.0	U
Trichloroethene	79-01-6	<1.0	U
Trichlorofluoromethane	75-69-4	1.4	
1,2,3-Trichloropropane	96-18-4	<1.0	U
Vinyl acetate	108-05-4	<1.0	U
Vinyl chloride	75-01-4	<1.0	U
m+p-Xylenes	108383/106423	<1.0	U
o-Xylene	95-47-6	<1.0	U

SURROGATE RECOVERY REPORT

Surrogate Compound	Added-ug/L	Measured-ug/L	%Rec	QC Limits
1,2-Dichloroethane d4	10.0	9.68	97	80--120
Toluene d8	10.0	9.48	95	80--120
p-Bromofluorobenzene	10.0	10.4	104	80--120

QUALIFIER CODE EXPLANATIONS AND NOTES:

U= Indicates compound was analyzed for but not detected.

REPORT COMMENTS: None

Analyst: ZJC Reviewing Supervisor: CSJ

/chem/IONTRAP2.i/vc062698.b/9840864a.d

**ENERGY LABORATORIES, INC.**P.O. BOX 30916 • 1120 SOUTH 27TH STREET • BILLINGS, MT 59107-0916 • PHONE (406) 252-6325
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Page: 1

To : Damschen & Associates, Inc.
Address : Bruce Siegmund
P.O. Box 4817
Helena, MT 59604-4817Lab No. : 98-40865 fs
Date : 7/10/98**WATER ANALYSIS REPORT**
Sanitation Inc., Landfill
SIMW-2A *Duplicate*Sample Date : 6/16/98
Sample Time : 1015
Sample Received : 6/22/98

Constituents	Results	Units	Re- marks	--Analysis--		Ref.	Method	Date	Time	By
Sulfate	202	mg/l		EPA	300.0	6/24/98	0834	SKW		
Chloride	59	mg/l		EPA	300.0	6/24/98	0834	SKW		
Conductivity, @ 25 degrees C	1150	µmhos/cm		EPA	120.1	6/22/98	1841	QED		
pH @ 25 degrees C	7.4	s.u.		EPA	150.1	6/22/98	1841	QED		
Nitrate plus Nitrite as N	2.37	mg/l		EPA	353.2	6/25/98	1051	BAS		
Chemical Oxygen Demand	2	mg/l		EPA	410.4	6/30/98	1300	BS		
Cyanide, Total	<0.005	mg/l	U	EPA	335.3	6/23/98	0800	ND		
Antimony, Dissolved	<0.05	mg/l	U	EPA	200.8	6/25/98	1538	LH		
Arsenic, Dissolved	<0.005	mg/l	U	EPA	200.8	6/25/98	1538	LH		
Barium, Dissolved	<0.1	mg/l	U	EPA	200.7	6/23/98	1425	RLH		
Beryllium, Dissolved	<0.001	mg/l	U	EPA	200.7	6/23/98	1425	RLH		
Cadmium, Dissolved	<0.001	mg/l	U	EPA	200.8	6/25/98	1538	LH		
Chromium, Dissolved	<0.01	mg/l	U	EPA	200.7	6/23/98	1425	RLH		
Cobalt, Dissolved	<0.01	mg/l	J	EPA	200.7	6/23/98	1425	RLH		
Copper, Dissolved	<0.01	mg/l	U	EPA	200.7	6/23/98	1425	RLH		
Iron, Dissolved	0.05	mg/l		EPA	200.7	6/23/98	1425	RLH		
Lead, Dissolved	<0.01	mg/l	U	EPA	200.8	6/25/98	1538	LH		
Mercury, Dissolved	<0.001	mg/l	U	EPA	200.8	6/25/98	1538	LH		
Nickel, Dissolved	<0.01	mg/l	U	EPA	200.8	6/25/98	1538	LH		
Selenium, Dissolved	<0.005	mg/l	J1	EPA	200.8	6/25/98	1538	LH		
Silver, Dissolved	<0.005	mg/l	U	EPA	200.8	6/25/98	1538	LH		
Thallium, Dissolved	<0.1	mg/l	U	EPA	200.8	6/25/98	1538	LH		
Vanadium, Dissolved	<0.1	mg/l	U	EPA	200.7	6/23/98	1425	RLH		
Zinc, Dissolved	0.02	mg/l		EPA	200.7	6/23/98	1425	RLH		

J Present but less than the practical quantitation limit. The estimated value is 0.008.

J1 Present but less than the practical quantitation limit. The estimated value is 0.005.

U Indicates the parameter was analyzed but not detected.



ENERGY LABORATORIES, INC.

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Client: Damschen and Associates, Inc.
Date Sampled: 16-JUN-98 10:15
Date Received: 22-JUN-98
Analysis Date: 26-JUN-1998 19:26
Project Info: Sanitation Inc. Landfill
Sample Info: SIMW-2A

Lab No.: 98-40865
Report Date: 07/02/98 16:23
Extraction Method: EPA 5030
Sample Matrix: WATER; pH= < 2

EPA METHOD 8260A: VOLATILE ORGANICS ANALYSIS REPORT

COMPOUNDS	CONCENTRATION UNITS = ug/L (ppb)		QUALIFIER
	CAS NO.	RESULT	
Acetone	67-64-1	<50	U
Acrylonitrile	107-13-1	<20	U
Benzene	71-43-2	<1.0	U
Bromochloromethane	74-97-5	<1.0	U
Bromodichloromethane	75-27-4	<1.0	U
Bromoform	75-25-2	<1.0	U
Bromomethane	74-83-9	<1.0	U
Carbon disulfide	75-15-0	<1.0	U
Carbon tetrachloride	56-23-5	<1.0	U
Chlorobenzene	108-90-7	<1.0	U
Chloroethane	75-00-3	<1.0	U
Chloroform	67-66-3	<1.0	U
Chloromethane	74-87-3	<1.0	U
Dibromochloromethane	124-48-1	<1.0	U
1,2-Dibromo-3-chloropropane	96-12-8	<1.0	U
1,2-Dibromoethane	106-93-4	<1.0	U
Dibromomethane	74-95-3	<1.0	U
1,2-Dichlorobenzene	95-50-1	<1.0	U
1,4-Dichlorobenzene	106-46-7	<1.0	U
trans-1,4-Dichloro-2-butene	110-57-6	<2.0	U
Dichlorodifluoromethane	75-71-8	<1.0	U
1,1-Dichloroethane	75-34-3	<1.0	U
1,2-Dichloroethane	107-06-2	<1.0	U
1,1-Dichloroethene	75-35-4	<1.0	U
cis-1,2-Dichloroethene	156-59-2	<1.0	U
trans-1,2-Dichloroethene	156-60-5	<1.0	U
1,2-Dichloropropane	78-87-5	<1.0	U
cis-1,3-Dichloropropene	10061-01-5	<1.0	U
trans-1,3-Dichloropropene	10061-02-6	<1.0	U
Ethyl benzene	100-41-4	<1.0	U
2-Hexanone	591-78-6	<20	U
Iodomethane	74-88-4	<1.0	U
Methyl ethyl ketone	78-93-3	<20	U
Methyl isobutyl ketone	108-10-1	<20	U
Methylene chloride	75-09-2	<1.0	U
Styrene	100-42-5	<1.0	U
1,1,1,2-Tetrachloroethane	630-20-6	<1.0	U
1,1,2,2-Tetrachloroethane	79-34-5	<1.0	U
Tetrachloroethene	127-18-4	<1.0	U
Toluene	108-88-3	<1.0	U
1,1,1-Trichloroethane	71-55-6	<1.0	U
1,1,2-Trichloroethane	79-00-5	<1.0	U
Trichloroethene	79-01-6	<1.0	U
Trichlorofluoromethane	75-69-4	<1.0	U
1,2,3-Trichloropropane	96-18-4	<1.0	U
Vinyl acetate	108-05-4	<1.0	U
Vinyl chloride	75-01-4	<1.0	U
m+p-Xylenes	108383/106423	<1.0	U
o-Xylene	95-47-6	<1.0	U

SURROGATE RECOVERY REPORT

Surrogate Compound	Added-ug/L	Measured-ug/L	%Rec	QC Limits
1,2-Dichloroethane d4	10.0	9.69	97	80--120
Toluene d8	10.0	9.37	94	80--120
p-Bromofluorobenzene	10.0	10.4	104	80--120

QUALIFIER CODE EXPLANATIONS AND NOTES:

U= Indicates compound was analyzed for but not detected.

REPORT COMMENTS: None

Analyst: 7/8 Reviewing Supervisor: CPJ /chem/IONTRAP2.i/vc062698.b/9840865a.d

**ENERGY LABORATORIES, INC.**P.O. BOX 30916 • 1120 SOUTH 27TH STREET • BILLINGS, MT 59107-0916 • PHONE (406) 252-6325
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Page: 1

To : Damschen & Associates, Inc.
Address : Bruce Siegmund
P.O. Box 4817
Helena, MT 59604-4817Lab No. : 98-40866 fs
Date : 7/10/98WATER ANALYSIS REPORT
Sanitation Inc., Landfill
SIMW-3Sample Date : 6/16/98
Sample Time : 1115
Sample Received : 6/22/98

Constituents	Results	Units	Re- marks	Ref.	Method	--Analysis--		By
						Date	Time	
Sulfate	129	mg/l		EPA	300.0	6/24/98	0845	SKW
Chloride	23	mg/l		EPA	300.0	6/24/98	0845	SKW
Conductivity, @ 25 degrees C	739	µmhos/cm		EPA	120.1	6/22/98	1843	QED
pH @ 25 degrees C	7.5	s.u.		EPA	150.1	6/22/98	1843	QED
Nitrate plus Nitrite as N	12.2	mg/l		EPA	353.2	6/25/98	1052	BS
Chemical Oxygen Demand	<1	mg/l		EPA	410.4	6/30/98	1300	BS
Cyanide, Total	<0.005	mg/l	U	EPA	335.3	6/23/98	0800	ND
Antimony, Dissolved	<0.05	mg/l	U	EPA	200.8	6/25/98	1544	LH
Arsenic, Dissolved	<0.005	mg/l	U	EPA	200.8	6/25/98	1544	LH
Barium, Dissolved	<0.1	mg/l	U	EPA	200.7	6/23/98	1429	RLH
Beryllium, Dissolved	<0.001	mg/l	U	EPA	200.7	6/23/98	1429	RLH
Cadmium, Dissolved	<0.001	mg/l	U	EPA	200.8	6/25/98	1544	LH
Chromium, Dissolved	<0.01(0.005)	mg/l	J	EPA	200.7	6/23/98	1429	RLH
Cobalt, Dissolved	<0.01	mg/l	U	EPA	200.7	6/23/98	1429	RLH
Copper, Dissolved	<0.01	mg/l	U	EPA	200.7	6/23/98	1429	RLH
Iron, Dissolved	0.24	mg/l		EPA	200.7	6/23/98	1429	RLH
Lead, Dissolved	<0.01	mg/l	U	EPA	200.8	6/25/98	1544	LH
Mercury, Dissolved	<0.001	mg/l	U	EPA	200.8	6/25/98	1544	LH
Nickel, Dissolved	<0.01	mg/l	U	EPA	200.8	6/25/98	1544	LH
Selenium, Dissolved	0.019	mg/l		EPA	200.8	6/25/98	1544	LH
Silver, Dissolved	<0.005	mg/l	U	EPA	200.8	6/25/98	1544	LH
Thallium, Dissolved	<0.1	mg/l	U	EPA	200.8	6/25/98	1544	LH
Vanadium, Dissolved	<0.1	mg/l	U	EPA	200.7	6/23/98	1429	RLH
Zinc, Dissolved	<0.01	mg/l	U	EPA	200.7	6/23/98	1429	RLH

J Present but less than the practical quantitation limit. The value in parentheses is estimated.

U Indicates the parameter was analyzed but not detected.



ENERGY LABORATORIES, INC.

LABORATORY REPORT

To : Dunsen & Associates, Inc.
Address : Bruce Stedman
P.O. Box 4811
Helena, MT 59604-1811
Lab No : 98-000812
Date : 7/10/98

WATER ANALYSIS REPORT
Sanitation Inc., Landfill
STW-3

Sample Date : 6/15/98
Sample Time : 11:15
Sample Received : 6/15/98

Constituents	Sample	Units	Ref.	Detected	Limit	Analysis
Asbestos	1.00	mg/L	100	0.00	0.00	0.00
Barium	2.00	mg/L	100	0.00	0.00	0.00
Beryllium	0.01	mg/L	100	0.00	0.00	0.00
Bismuth	0.01	mg/L	100	0.00	0.00	0.00
Boron	0.01	mg/L	100	0.00	0.00	0.00
Bromine	0.01	mg/L	100	0.00	0.00	0.00
Calcium	10.00	mg/L	100	0.00	0.00	0.00
Cadmium	0.01	mg/L	100	0.00	0.00	0.00
Chromium	0.01	mg/L	100	0.00	0.00	0.00
Cobalt	0.01	mg/L	100	0.00	0.00	0.00
Copper	0.01	mg/L	100	0.00	0.00	0.00
Iron	0.01	mg/L	100	0.00	0.00	0.00
Lead	0.01	mg/L	100	0.00	0.00	0.00
Manganese	0.01	mg/L	100	0.00	0.00	0.00
Mercury	0.01	mg/L	100	0.00	0.00	0.00
Nickel	0.01	mg/L	100	0.00	0.00	0.00
Selenium	0.01	mg/L	100	0.00	0.00	0.00
Silver	0.01	mg/L	100	0.00	0.00	0.00
Sulfate	0.01	mg/L	100	0.00	0.00	0.00
Thallium	0.01	mg/L	100	0.00	0.00	0.00
Vanadium	0.01	mg/L	100	0.00	0.00	0.00
Zinc	0.01	mg/L	100	0.00	0.00	0.00

1. Results are from the analytical concentration limit. The value is provided as detection.
2. Detection limit comparison was provided but not detected.



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FAX (406) 252-6069 • 1-800-735-4489 • E-MAIL el@energylab.comClient: Damschen and Associates, Inc.
Date Sampled: 16-JUN-98 11:15
Date Received: 22-JUN-98
Analysis Date: 26-JUN-1998 20:08
Project Info: Sanitation Inc. Landfill
Sample Info: SIMW-3Lab No.: 98-40866
Report Date: 07/02/98 16:23
Extraction Method: EPA 5030
Sample Matrix: WATER; pH= < 2EPA METHOD 8260A: VOLATILE ORGANICS ANALYSIS REPORT

CONCENTRATION UNITS = ug/L (ppb)			
COMPOUNDS	CAS NO.	RESULT	QUALIFIER
Acetone	67-64-1	<50	U
Acrylonitrile	107-13-1	<20	U
Benzene	71-43-2	<1.0	U
Bromochloromethane	74-97-5	<1.0	U
Bromodichloromethane	75-27-4	<1.0	U
Bromoform	75-25-2	<1.0	U
Bromomethane	74-83-9	<1.0	U
Carbon disulfide	75-15-0	<1.0	U
Carbon tetrachloride	56-23-5	<1.0	U
Chlorobenzene	108-90-7	<1.0	U
Chloroethane	75-00-3	<1.0	U
Chloroform	67-66-3	<1.0	U
Chloromethane	74-87-3	<1.0	U
Dibromochloromethane	124-48-1	<1.0	U
1,2-Dibromo-3-chloropropane	96-12-8	<1.0	U
1,2-Dibromoethane	106-93-4	<1.0	U
Dibromomethane	74-95-3	<1.0	U
1,2-Dichlorobenzene	95-50-1	<1.0	U
1,4-Dichlorobenzene	106-46-7	<1.0	U
trans-1,4-Dichloro-2-butene	110-57-6	<2.0	U
Dichlorodifluoromethane	75-71-8	1.2	
1,1-Dichloroethane	75-34-3	<1.0	U
1,2-Dichloroethane	107-06-2	<1.0	U
1,1-Dichloroethene	75-35-4	<1.0	U
cis-1,2-Dichloroethene	156-59-2	<1.0	U
trans-1,2-Dichloroethene	156-60-5	<1.0	U
1,2-Dichloropropane	78-87-5	<1.0	U
cis-1,3-Dichloropropene	10061-01-5	<1.0	U
trans-1,3-Dichloropropene	10061-02-6	<1.0	U
Ethyl benzene	100-41-4	<1.0	U
2-Hexanone	591-78-6	<20	U
Iodomethane	74-88-4	<1.0	U
Methyl ethyl ketone	78-93-3	<20	U
Methyl isobutyl ketone	108-10-1	<20	U
Methylene chloride	75-09-2	<1.0	U
Styrene	100-42-5	<1.0	U
1,1,1,2-Tetrachloroethane	630-20-6	<1.0	U
1,1,2,2-Tetrachloroethane	79-34-5	<1.0	U
Tetrachloroethene	127-18-4	<1.0	U
Toluene	108-88-3	<1.0	U
1,1,1-Trichloroethane	71-55-6	<1.0	U
1,1,2-Trichloroethane	79-00-5	<1.0	U
Trichloroethene	79-01-6	<1.0	U
Trichlorofluoromethane	75-69-4	1.4	
1,2,3-Trichloropropane	96-18-4	<1.0	U
Vinyl acetate	108-05-4	<1.0	U
Vinyl chloride	75-01-4	<1.0	U
m+p-Xylenes	108383/106423	<1.0	U
o-Xylene	95-47-6	<1.0	U

SURROGATE RECOVERY REPORT

Surrogate Compound	Added-ug/L	Measured-ug/L	%Rec	QC Limits
1,2-Dichloroethane d4	10.0	9.99	100	80--120
Toluene d8	10.0	8.77	88	80--120
p-Bromofluorobenzene	10.0	10.5	105	80--120

QUALIFIER CODE EXPLANATIONS AND NOTES:

U= Indicates compound was analyzed for but not detected.

REPORT COMMENTS: None

Analyst: 7/jcReviewing Supervisor: [Signature]

/chem/IONTRAP2.i/vc062698.b/9840866a.d



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Client: Damschen and Associates, Inc.
Date Sampled:
Date Received: 22-JUN-98
Analysis Date: 29-JUN-1998 23:50
Project Info: Sanitation Inc. Landfill
Sample Info: Trip Blank

Lab No.: 98-40868
Report Date: 07/06/98 15:45
Extraction Method: EPA 5030
Sample Matrix: WATER; pH= < 2

EPA METHOD 8260A: VOLATILE ORGANICS ANALYSIS REPORT

CONCENTRATION UNITS = ug/L (ppb)			
COMPOUNDS	CAS NO.	RESULT	QUALIFIER
Acetone	67-64-1	<50	U
Acrylonitrile	107-13-1	<20	U
Benzene	71-43-2	<1.0	U
Bromochloromethane	74-97-5	<1.0	U
Bromodichloromethane	75-27-4	<1.0	U
Bromoform	75-25-2	<1.0	U
Bromomethane	74-83-9	<1.0	U
Carbon disulfide	75-15-0	3.4	
Carbon tetrachloride	56-23-5	<1.0	U
Chlorobenzene	108-90-7	<1.0	U
Chloroethane	75-00-3	<1.0	U
Chloroform	67-66-3	<1.0	U
Chloromethane	74-87-3	<1.0	U
Dibromochloromethane	124-48-1	<1.0	U
1,2-Dibromo-3-chloropropane	96-12-8	<1.0	U
1,2-Dibromoethane	106-93-4	<1.0	U
Dibromomethane	74-95-3	<1.0	U
1,2-Dichlorobenzene	95-50-1	<1.0	U
1,4-Dichlorobenzene	106-46-7	<1.0	U
trans-1,4-Dichloro-2-butene	110-57-6	<2.0	U
Dichlorodifluoromethane	75-71-8	<1.0	U
1,1-Dichloroethane	75-34-3	<1.0	U
1,2-Dichloroethane	107-06-2	<1.0	U
1,1-Dichloroethene	75-35-4	<1.0	U
cis-1,2-Dichloroethene	156-59-2	<1.0	U
trans-1,2-Dichloroethene	156-60-5	<1.0	U
1,2-Dichloropropane	78-87-5	<1.0	U
cis-1,3-Dichloropropene	10061-01-5	<1.0	U
trans-1,3-Dichloropropene	10061-02-6	<1.0	U
Ethyl benzene	100-41-4	<1.0	U
2-Hexanone	591-78-6	<20	U
Iodomethane	74-88-4	<1.0	U
Methyl ethyl ketone	78-93-3	<20	U
Methyl isobutyl ketone	108-10-1	<20	U
Methylene chloride	75-09-2	<1.0	U
Styrene	100-42-5	<1.0	U
1,1,1,2-Tetrachloroethane	630-20-6	<1.0	U
1,1,2,2-Tetrachloroethane	79-34-5	<1.0	U
Tetrachloroethene	127-18-4	<1.0	U
Toluene	108-88-3	<1.0	U
1,1,1-Trichloroethane	71-55-6	<1.0	U
1,1,2-Trichloroethane	79-00-5	<1.0	U
Trichloroethene	79-01-6	<1.0	U
Trichlorofluoromethane	75-69-4	<1.0	U
1,2,3-Trichloropropane	96-18-4	<1.0	U
Vinyl acetate	108-05-4	<1.0	U
Vinyl chloride	75-01-4	<1.0	U
m+p-Xylenes	108383/106423	<1.0	U
o-Xylene	95-47-6	<1.0	U

SURROGATE RECOVERY REPORT

Surrogate Compound	Added-ug/L	Measured-ug/L	%Rec	QC Limits
1,2-Dichloroethane d4	10.0	10.2	102	80--120
Toluene d8	10.0	10.2	102	80--120
p-Bromofluorobenzene	10.0	10.3	103	80--120

QUALIFIER CODE EXPLANATIONS AND NOTES:

U= Indicates compound was analyzed for but not detected.

REPORT COMMENTS: None

Analyst: 79C

Reviewing Supervisor: CHJ

/chem/IONTRAP2.i/vc062998.b/9840868a.d

Quality Control Sample: Laboratory Reagent Blank 26-JUN-1998 12:57

Report Date: 07/02/98 16:22

Extraction Method: EPA 5030

Sample Matrix: WATER

Remarks: This Laboratory Reagent Blank Quality Control Sample was extracted and analyzed with your set of samples to determine if method analytes or other interferences are present in the laboratory environment, the reagents, or the apparatus.

EPA METHOD 8260A: VOLATILE ORGANICS ANALYSIS REPORT

CONCENTRATION UNITS = ug/L (ppb)			
<u>COMPOUNDS</u>	<u>CAS NO.</u>	<u>RESULT</u>	<u>QUALIFIER</u>
Acetone	67-64-1	<50	U
Acrylonitrile	107-13-1	<20	U
Benzene	71-43-2	<1.0	U
Bromochloromethane	74-97-5	<1.0	U
Bromodichloromethane	75-27-4	<1.0	U
Bromoform	75-25-2	<1.0	U
Bromomethane	74-83-9	<1.0	U
Carbon disulfide	75-15-0	<1.0	U
Carbon tetrachloride	56-23-5	<1.0	U
Chlorobenzene	108-90-7	<1.0	U
Chloroethane	75-00-3	<1.0	U
Chloroform	67-66-3	<1.0	U
Chloromethane	74-87-3	<1.0	U
Dibromochloromethane	124-48-1	<1.0	U
1,2-Dibromo-3-chloropropane	96-12-8	<1.0	U
1,2-Dibromoethane	106-93-4	<1.0	U
Dibromomethane	74-95-3	<1.0	U
1,2-Dichlorobenzene	95-50-1	<1.0	U
1,4-Dichlorobenzene	106-46-7	<1.0	U
trans-1,4-Dichloro-2-butene	110-57-6	<2.0	U
Dichlorodifluoromethane	75-71-8	<1.0	U
1,1-Dichloroethane	75-34-3	<1.0	U
1,2-Dichloroethane	107-06-2	<1.0	U
1,1-Dichloroethene	75-35-4	<1.0	U
cis-1,2-Dichloroethene	156-59-2	<1.0	U
trans-1,2-Dichloroethene	156-60-5	<1.0	U
1,2-Dichloropropane	78-87-5	<1.0	U
cis-1,3-Dichloropropene	10061-01-5	<1.0	U
trans-1,3-Dichloropropene	10061-02-6	<1.0	U
Ethyl benzene	100-41-4	<1.0	U
2-Hexanone	591-78-6	<20	U
Iodomethane	74-88-4	<1.0	U
Methyl ethyl ketone	78-93-3	<20	U
Methyl isobutyl ketone	108-10-1	<20	U
Methylene chloride	75-09-2	<1.0	U
Styrene	100-42-5	<1.0	U
1,1,1,2-Tetrachloroethane	630-20-6	<1.0	U
1,1,2,2-Tetrachloroethane	79-34-5	<1.0	U
Tetrachloroethene	127-18-4	<1.0	U
Toluene	108-88-3	<1.0	U
1,1,1-Trichloroethane	71-55-6	<1.0	U
1,1,2-Trichloroethane	79-00-5	<1.0	U
Trichloroethene	79-01-6	<1.0	U
Trichlorofluoromethane	75-69-4	<1.0	U
1,2,3-Trichloropropane	96-18-4	<1.0	U
Vinyl acetate	108-05-4	<1.0	U
Vinyl chloride	75-01-4	<1.0	U
m+p-Xylenes	108383/106423	<1.0	U
o-Xylene	95-47-6	<1.0	U

----- SURROGATE RECOVERY REPORT -----

<u>Surrogate Compound</u>	<u>Added-ug/L</u>	<u>Measured-ug/L</u>	<u>%Rec</u>	<u>QC Limits</u>
1,2-Dichloroethane d4	10.0	9.10	91	80--120
Toluene d8	10.0	10.2	102	80--120
p-Bromofluorobenzene	10.0	10.5	105	80--120

QUALIFIER CODE EXPLANATIONS AND NOTES:

U= Indicates compound was analyzed for but not detected.

REPORT COMMENTS: None

Analyst: HA

Reviewing Supervisor: CAF

/chem/IONTRAP2.i/vc062698.b/blk0626a.d

Lab No(s). 98-40864 - 98-40867

QUALITY ASSURANCE DATA PACKAGE

This report includes the results of quality assurance tests performed with the sample analyses. They are performed to determine if the methodology is in control and to monitor the laboratory's ability to produce accurate and precise results.

Constituents	Duplicate Analysis		Spiked	----- Reference -----			Date Analyzed
	Analysis		Analysis	Blank	Sample	Accept	
	--- mg/l (ppm) ---		%	Analysis,	Analysis,	Range	
	Original	Duplicate	Recovery	mg/l ppm	mg/l ppm	mg/l ppm	
Sulfate	9	9	98	<1	100	112-138	24-JUN-98
Chloride	129	129	96	<1	25	22-28	24-JUN-98
Specific Conductance @ 25 umhos/cm	1160	1150	N/A	1	N/A	N/A	22-JUN-98
pH	7.8	7.7	N/A	N/A	N/A	N/A	22-JUN-98
Nitrate plus Nitrite as N	5.76	5.79	106	<0.05	2.39	2.04-2.56	25-JUN-98
Total Cyanide	0.056	0.056	102	<0.005	0.204	0.139-0.271	23-JUN-98
Chemical Oxygen Demand	<1	<1	92	<1	77	70-94	30-JUN-98

Metals Analysis

Antimony, Dissolved	<0.05	<0.05	113	<0.05	0.05	0.04 - 0.06	25-JUN-98
Arsenic, Dissolved	<0.005	<0.005	92	<0.005	0.050	0.045 - 0.055	25-JUN-98
Barium, Dissolved	<0.1	<0.1	103	<0.1	1.0	0.9 - 1.1	23-JUN-98
Beryllium, Dissolved	<0.001	<0.001	100	<0.001	0.487	0.450 - 0.550	23-JUN-98
Cadmium, Dissolved	<0.001	<0.001	98	<0.001	0.051	0.045 - 0.055	25-JUN-98
Chromium, Dissolved	<0.01	<0.01	105	<0.01	1.02	0.90 - 1.10	23-JUN-98
Cobalt, Dissolved	0.01	<0.01	102	<0.01	0.99	0.90 - 1.10	23-JUN-98
Copper, Dissolved	<0.01	<0.01	102	<0.01	0.98	0.90 - 1.10	23-JUN-98
Iron, Dissolved	0.05	0.06	104	<0.03	5.04	4.50 - 5.50	23-JUN-98
Lead, Dissolved	<0.01	<0.01	101	<0.01	0.05	0.04 - 0.06	25-JUN-98
Mercury, Dissolved	<0.001	<0.001	97	<0.001	0.005	0.004 - 0.006	25-JUN-98
Nickel, Dissolved	<0.01	<0.01	99	<0.01	0.05	0.04 - 0.06	25-JUN-98
Selenium, Dissolved	0.019	0.018	92	<0.005	0.051	0.045 - 0.055	25-JUN-98
Silver, Dissolved	<0.005	<0.005	89	<0.005	0.020	0.018 - 0.022	25-JUN-98
Thallium, Dissolved	<0.1	<0.1	102	<0.1	0.05	0.04 - 0.06	25-JUN-98
Vanadium, Dissolved	<0.1	<0.1	107	<0.1	1.0	0.9 - 1.1	23-JUN-98
Zinc, Dissolved	0.02	0.02	103	<0.01	1.00	0.90 - 1.10	23-JUN-98

Lab Nos.: 98-40864 - 98-40868

Date: 22-JUN-98

Received by: Randa Hoelscher

Logged In by: Randa Hoelscher

SAMPLE CONDITION QA/QC REPORT

This report provides information about the condition of the sample(s)
and associated sample custody information on receipt at the laboratory.

Chain of Custody Form
Completed & Signed

Yes Comments: _____

Chain of Custody Seal

Yes Comments: _____

Intact

Yes Comments: _____

Signature Match Chain of Custody vs. Seal

Yes Comments: _____

Samples Received Cold

No Comments: _____

Samples Received Within Holding Time

Yes Comments: _____

Samples Received in Proper Containers

Yes Comments: _____

Samples Received Properly Preserved

No Comments: Received 98-40866 dissolved metals sample at
pH7, 1 ml HNO3 added in lab.

Samples requiring analysis for volatile organics are tested for proper preservation at the time of analysis.
Any preservation problems encountered for these samples are noted on the analytical parameter report pages.

Client notified about sample discrepancies:

Who: _____ By: _____ Date/Time: _____

Method of Shipping: UPS

Additional comments: _____

ENERGY LABORATORIES, INC
P.O. Box 30916 1120 South 27th Street
Billings, Montana 59107

toll-free 800-735-4489
voice 406-252-6325
fax 406-252-6069

CHAIN OF CUSTODY RECORD

PLEASE PRINT OR TYPE ALL
INFORMATION EXCEPT SIGNATURES

P.O. #		Project Name / Address		number of containers	Sample Type: A W S V U O Air Water Solids/solids Vegetation Other	Analysis Requested										Comments, Special Instructions, etc.
Contact Name & Phone		Sampler's signature				MT. SOLID WASTE TABLE 1	MT. SOLID WASTE TABLE 1 - METALS + VOC ONLY									
Bruce Siegmund		1144 - 8627														
Invoice to:		Damschen + Assoc														
Report to:		D+A														
SAMPLE I.D.																
6/14/98	1015		Simw-2	6w	X											
	1015		Simw-2A	6w	X											
	1115		Simw-3	6w	X											
X	0930		SIP-2	3w		X										
			TRIP BLANK	VOC 1w	VOC X											
1. Relinquished (signature)		Date	Time	Received by: (signature)		3. Relinquished (signature)		Date	Time	Received by: (signature):						
		6/19/98	1600													
2. Relinquished (signature)		Date	Time	Received by: (signature)		4. Relinquished (signature)		Date	Time	Received for laboratory by (signature):						
								06/22/98	1200							



DAMSCHE & ASSOCIATES, INC.
CONSULTING ENGINEERS

2030 11TH AVENUE • SUITE 11
P.O. BOX 4817 • HELENA, MT 59604

TELEPHONE (406) 449-8627
FAX (406) 449-8631

January 11, 1998

Pat Potts
Montana Department of Environmental Quality
P.O. Box 200901
Helena, MT 59620-0901

RECEIVED
JAN 14 1999

MONTANA
DEPT. OF ENVIRONMENTAL QUALITY
COMMUNITY SERVICES BUREAU

Dear Ms. Potts:

Enclosed please find the results of the Autumn, 1998 ground-water monitoring at the Sanitation, Inc. landfill in Lewistown, Montana. Sampling was undertaken on October 6, 1998.

Ground-Water Flow

The static water levels in the various wells and piezometers did not follow any regular pattern relative to previous measurements. That is, measured water levels tended to all be higher or lower, with a few minor exceptions. Measurements taken during the last visit showed the water in some wells to range from nearly three feet higher to over four feet lower than the previous measurement. Yet, all of the levels fell within the range previously observed. The area had experienced two or three days of significant precipitation just prior to our visit, so we may have taken our observations during a recharge event.

As usual, the hydraulic gradient varied from the eastern side of the site to the western side. The gradient is usually steeper on the western edge of the facility, and the last visit conformed with this trend. The hydraulic gradient (I) near SIMW-1 and -2 can be measured from the enclosed map to be about 0.043. The gradient near SIMW-3 and SIP-1 is about 0.12. Using the previously-accepted estimated porosity (n_e) of 0.35, the seepage velocity (V_s) and discharge (Q) can be calculated for the area around each of the wells. The hydraulic conductivity (K) for the area around SIMW-1 and -2 was measured at 2.6×10^{-2} cm/sec (75 ft/day). Using

$$V_s = KI/n_e$$

the seepage velocity for the area around SIMW-1 can be calculated as 3.25×10^{-3} cm/day (9.2 ft/day). The hydraulic conductivity around SIMW-3 was measured at 3.2×10^{-3} cm/sec (9.2 ft/day), with a resulting seepage velocity of 1.1×10^{-3} cm/sec (3.15 ft/day).

Discharge can be calculated employing these data along with a given area of discharge (A) using

$$Q = KIA.$$

Assuming an average saturated zone thickness of about 3 feet in the area of SIMW-1 and -2 and a discharge width of 600 feet, the discharge becomes 164 cubic meters per day (m^3/day) or 5,800

*File: Fergus Co
Sanitation Inc.
grd wtr (ANALY)*

cubic feet per day (ft^3/day). Using a similar saturated zone thickness and a value of 300 feet for the discharge width, the discharge for the area around SIMW-3 can be calculated at $34 \text{ m}^3/\text{day}$, or $1,210 \text{ ft}^3/\text{day}$. This only accounts for 900 feet of the approximately 1,600 of width presumed to be transmitting ground water. The two area produce between 5 and 10 cubic feet of water per day for each foot of saturated zone width. Assuming a median value of 7.5 cubic feet per day discharge through the remaining 700 feet, one can estimate that there is a total of approximately $350 \text{ m}^3/\text{day}$ ($12,360 \text{ ft}^3/\text{day}$) passing through the saturated zone.

Ground-Water Quality

Please note that we were unable to obtain a sufficient volume of water to conduct a full analysis for monitoring well SIMW-1. The water level was barely above the bottom of the screened interval, and the well was recharging very slowly. While we could have used piezometer SIP-2 as an alternative site, we felt it was more important to gain limited data from the primary well rather than a more complete analysis from the secondary sampling point. Thus, the water retrieved was analyzed for nitrate and volatile organic compounds (VOCs), which are the analytes of greatest concern at this facility.

The ground-water quality has not changed significantly since the last monitoring event. There was one maximum contaminant limit (MCL) exceedance, which was nitrate in monitoring well SIMW-3. The reported value of 11 milligrams per liter (mg/l) exceeds the MCL of 10 mg/l .

There are several ways to approach a statistical evaluation of the data reported for the Sanitation, Inc. landfill. If monitoring well SIMW-1 and piezometer SIP-2 are considered background wells, then analysis of variance (ANOVA) can be applied to the data. Under this scenario, four analytes occur in concentrations that significantly exceed background. Those are specific conductance, chloride and sulfate in monitoring well SIMW-2 and nitrate in SIMW-3. Further evaluation in the form of a prediction interval analysis can be completed, also using the samples from SIMW-1 and SIP-2 as background. This evaluation supports the ANOVA results. Tolerance and confidence intervals cannot be properly calculated and evaluated for this purpose because MCLs or some human health standards must be supplied. There are no such limits established for any of the analytes in question, except nitrate.

A third way of evaluating the data involves the presumption that all of the wells are down-gradient from the waste fill area. Since background data would be eliminated, and since human health standards have not been established for three of the four analytes in question, the only reasonable means of analysis would be an intra-well prediction interval. The results of such an analysis would determine if the value reported for the latest analysis falls within a predicted range based upon all previously-collected data from a given well. In this case, none of the reported analytes, including nitrate in monitoring well SIMW-3, showed statistically significant exceedances.

Volatile organic compounds (VOCs) were reported in all three wells, but all were estimated values below the practical quantitation limit (PQL). None of these compounds was shown to be in exceedance of any statistical or MCL parameters.

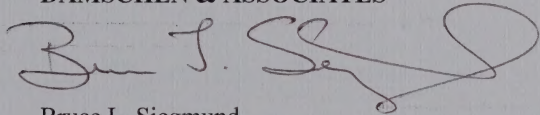
A number of metals were also detected in the samples at near-PQL concentrations. None of these parameters exceeded MCL values or statistical parameters.

The four inorganic constituents found to be in statistical exceedance using presumed background data are indicator parameters that are not included in ARM 17.50.708 Table 2. While nitrate was shown to exceed the established human health standard, the intra-well prediction interval analysis shows that the value of 11 mg/l does not exceed the upper limit of the predicted range. Thus, on the basis of the existing data, the water quality in samples from this well are not deteriorating significantly with regard to any of the four inorganic constituents in question. The VOCs detected to date have yet to occur in concentrations above the given PQLs, and fail to constitute statistical exceedances. The saturated zone being monitored is within a recharge zone, and is very thin, so very little dilution can occur with respect to leachate that might be entering into the ground water. On the basis of these evaluations, we feel that there is no requirement for the facility to change its current ground-water monitoring status.

If you have any questions or require any additional information, please do not hesitate to contact us.

Sincerely,

DAMSCHE & ASSOCIATES

A handwritten signature in dark ink, appearing to read "Bruce L. Siegmund", with a stylized flourish at the end.

Bruce L. Siegmund
Project Hydrogeologist

Enclosures

CC: William Spoya
Al Gallagher, Sanitation, Inc.
F. Patrick Crowley, Montana DEQ

DAMSCHEEN & ASSOCIATES, INC.
Landfill Ground-Water Monitoring Field Report

Project Name/Number SANITATION INC Well Number Simur - 1

Sampler(s) BS

Date 10/6/98 Time 1030

Conditions WINDY CLEAR 55° F

Field Data:

Table (circle) (1) 2

Depth to Water 46.89 Total Depth 47.70

Volume of Water Purged ≈ 200 ml

Temperature--#1 _____ --#2 _____ --#3 _____ --#4 _____

Conductivity--#1 _____ --#2 _____ --#3 _____ --#4 _____

pH--#1 _____ --#2 _____ --#3 _____ --#4 _____

Recovery: h₁ 0.00 h₂ 0.01 time 52 Sec @ 47.5'

Sample Preservatives:

1000 ml, 6, w/ no preservative _____

250 ml w/ H₂SO₄ (yellow) _____

250 ml w/ HNO₃ (red), filtered _____

250 ml w/ NaOH (green) _____

500 ml w/ no preservative _____

40 ml, 2, w/ HCl (blue) _____

Comments (attach change of instrumentation information to this sheet if necessary):

SWIFT IS VERY LOW, BUT WELL IS
RECHARGING VERY SLOWLY

46
47.89 TD = 47.70

DAMSCHEEN & ASSOCIATES, INC.
Landfill Ground-Water Monitoring Field Report

Project Name/Number SANITATION INC Well Number Simw-2

Sampler(s) B5

Date 6/4/98 Time 1215

Conditions Windy 55-60 F Clear

Field Data: Table (circle) 1 2

Depth to Water 36.18 Total Depth 42.5

Volume of Water Purged 3 1/2 BAILERS BAILER DRW

Temperature--#1 52 --#2 _____ --#3 _____ --#4 _____

Conductivity--#1 1506 --#2 _____ --#3 _____ --#4 _____

pH--#1 10.92 --#2 _____ --#3 _____ --#4 _____

Recovery: h₁ 0.00 h₂ 0.10 time 7 SET

Sample Preservatives:

1000 ml, 6, w/ no preservative _____

250 ml w/ H₂SO₄ (yellow) _____

250 ml w/ HNO₃ (red), filtered _____

250 ml w/ NaOH (green) _____

500 ml w/ no preservative _____

40 ml, 2, w/ HCl (blue) _____

Comments (attach change of instrumentation information to this sheet if necessary):

DAMSCHEM & ASSOCIATES, INC.
Landfill Ground-Water Monitoring Field Report

Project Name/Number SANITATION INC Well Number SWW-3

Sampler(s) BS

Date 10/6/98 Time 1315

Conditions _____

Field Data: Table (circle) 1 2

Depth to Water 37.52 Total Depth _____

Volume of Water Purged 5.5 BAILERS BAILED DRY

Temperature--#1 _____ --#2 _____ --#3 _____ --#4 _____

Conductivity--#1 681 --#2 _____ --#3 _____ --#4 _____

pH--#1 10.14 --#2 _____ --#3 _____ --#4 _____

Recovery: h₁ 0 h₂ 0.10 time 9:15 @ 37'

Sample Preservatives:

1000 ml, 6, w/ no preservative _____
250 ml w/ H₂SO₄ (yellow) _____
250 ml w/ HNO₃ (red), filtered _____
250 ml w/ NaOH (green) _____
500 ml w/ no preservative _____
40 ml, 2, w/ HCl (blue) _____

Comments (attach change of instrumentation information to this sheet if necessary):

Facility:D&A160 Sanitation, Inc.
Address:P.O. Box 882
City:Lewistown ST:MT Zip:59457
County:FERGUS
Contact:Bill Spoya
Phone:() -

Permit Type:Detection

Constituent:Cond Specific Conductivity

CAS Number: - -
MCL: 0.000 umhos/cm
ACL: 0.000 umhos/cm
Detect Limit: 1.000 umhos/cm

Start Date:Aug 16 1995
End Date:Jun 03 1999

Data Mode:Original

Background Wells

Well ID	N	%ND	Max Value	Min Value	Mean	Std Dev
SIMW-1	3	0	958.00	751.00	831.67	110.80
SIP-2	1	0	822.00	822.00	822.00	0.00

Compliance Wells

Well ID	N	%ND	Max Value	Min Value	Mean	Std Dev
SIMW-2	9	0	1480.00	1040.00	1173.33	122.47
SIMW-3	8	0	893.00	683.00	754.50	62.99

Well ID	Date	Observation	Rank
SIMW-1	08/16/95	958.0000	12.0
SIMW-1	06/03/97	786.0000	9.0
SIMW-1	11/04/97	751.0000	6.0
SIP-2	11/26/96	822.0000	10.0
			áááááááááááá
Background Rank Sum:			37.0
Background Rank Avg:			9.3
SIMW-2	08/16/95	1480.0000	21.0
SIMW-2	06/10/96	1180.0000	19.5
SIMW-2	10/22/96	1180.0000	19.5
SIMW-2	06/03/97	1040.0000	13.0
SIMW-2	11/04/97	1110.0000	14.0
SIMW-2	06/16/98	1150.0000	17.5
SIMW-2	06/16/98	1150.0000	17.5
SIMW-2	10/06/98	1140.0000	16.0
SIMW-2	10/06/98	1130.0000	15.0
			áááááááááááá

Compliance Well	Rank Sum:	153.0
Compliance Well	Rank Avg:	17.0
SIMW-3	08/16/95	893.0000 11.0
SIMW-3	06/10/96	750.0000 5.0
SIMW-3	10/22/96	706.0000 2.0
SIMW-3	06/03/97	683.0000 1.0
SIMW-3	11/04/97	767.0000 7.5
SIMW-3	11/04/97	767.0000 7.5
SIMW-3	06/16/98	739.0000 4.0
SIMW-3	10/06/98	731.0000 3.0

aaaaaaaaaa

Compliance Well	Rank Sum:	41.0
Compliance Well	Rank Avg:	5.1

H Statistic:	15.9058
H Adjusted for Ties:	15.9369
Degrees of Freedom:	2
Chi-Squared:	5.9915
ZA/DF:	1.9600

* Indicates significant evidence of contamination

Well ID	Crit. Diff.	Rank Avg.	Background Rank Avg.	Difference
*SIMW-2	7.2604	17.00	9.25	7.75
SIMW-3	7.3987	5.13	9.25	-4.13

Kruskal-Wallace Test

Report Printed: 12-28-1998 12:04

Facility:D&A160 Sanitation, Inc.

Address:P.O. Box 882

City:Lewistown ST:MT Zip:59457
County:FERGUS

Contact:Bill Spoya
Phone:() -

Permit Type:Detection

Constituent:Chld dis Chloride, dissolved

CAS Number:16887-00-6

MCL:	0.000 mg/l
ACL:	0.000 mg/l
Detect Limit:	0.001 mg/l

Start Date:Aug 16 1995

End Date:Jun 03 1999

Data Mode:Original

Background Wells

Well ID	N	%ND	Max Value	Min Value	Mean	Std Dev
SIMW-1	3	0	26.00	24.00	25.00	1.00
SIP-2	1	0	28.00	28.00	28.00	0.00

Compliance Wells

Well ID	N	%ND	Max Value	Min Value	Mean	Std Dev
SIMW-2	9	0	63.00	47.00	56.33	5.05
SIMW-3	8	0	34.00	23.00	29.13	3.94

Well ID	Date	Observation	Rank
SIMW-1	08/16/95	26.0000	5.0
SIMW-1	06/03/97	25.0000	3.5
SIMW-1	11/04/97	24.0000	2.0
SIP-2	11/26/96	28.0000	7.0

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Background Rank Sum: 17.5

Background Rank Avg: 4.4

SIMW-2	08/16/95	55.0000	15.0
SIMW-2	06/10/96	47.0000	13.0
SIMW-2	10/22/96	62.0000	20.0
SIMW-2	06/03/97	63.0000	21.0
SIMW-2	11/04/97	58.0000	18.0
SIMW-2	06/16/98	56.0000	16.5
SIMW-2	06/16/98	59.0000	19.0
SIMW-2	10/06/98	56.0000	16.5
SIMW-2	10/06/98	51.0000	14.0

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Compliance Well Rank Sum: 153.0

Compliance Well Rank Avg: 17.0

SIMW-3	08/16/95	34.0000	11.5
SIMW-3	06/10/96	30.0000	9.0
SIMW-3	10/22/96	34.0000	11.5
SIMW-3	06/03/97	27.0000	6.0
SIMW-3	11/04/97	30.0000	9.0
SIMW-3	11/04/97	30.0000	9.0
SIMW-3	06/16/98	23.0000	1.0
SIMW-3	10/06/98	25.0000	3.5

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Compliance Well Rank Sum: 60.5

Compliance Well Rank Avg: 7.6

H Statistic: 15.4310
H Adjusted for Ties: 15.5015
Degrees of Freedom: 2
Chi-Squared: 5.9915
ZÁ/DF: 1.9600

* Indicates significant evidence of contamination

Well ID	Crit. Diff.	Rank Avg.	Background Rank Avg.	Difference
*SIMW-2	7.2604	17.00	4.38	12.63
SIMW-3	7.3987	7.56	4.38	3.19

Kruskal-Wallace Test

Report Printed: 12-28-1998 12:04

Facility:D&A160 Sanitation, Inc.

Address:P.O. Box 882

City:Lewistown
County:FERGUS

ST:MT Zip:59457

Contact: Bill Spoya
Phone: () -

Permit Type: Detection

Constituent: NO3/NO2 Nitrate, Nitrite

CAS Number: - -

MCL: 0.000 mg/l

ACL: 0.000 mg/l

Detect Limit: 0.000 mg/l

Start Date: Aug 16 1995

End Date: Jun 03 1999

Data Mode: Original

Background Wells

Well ID	N	%ND	Max Value	Min Value	Mean	Std Dev
SIMW-1	5	0	5.56	3.74	4.71	0.80
SIP-2	1	0	1.79	1.79	1.79	0.00

Compliance Wells

Well ID	N	%ND	Max Value	Min Value	Mean	Std Dev
SIMW-2	9	0	4.18	2.11	3.12	0.83
SIMW-3	8	0	12.20	8.96	9.79	1.17

Well ID	Date	Observation	Rank
SIMW-1	08/16/95	4.4900	13.0
SIMW-1	06/10/96	4.2400	12.0
SIMW-1	06/03/97	5.5600	15.0
SIMW-1	11/04/97	3.7400	7.0
SIMW-1	10/06/98	5.5200	14.0
SIP-2	11/26/96	1.7900	1.0

aaaaaaaaaaaa

Background Rank Sum: 62.0

Background Rank Avg: 10.3

SIMW-2	08/16/95	3.7800	8.0
SIMW-2	06/10/96	4.1800	11.0
SIMW-2	10/22/96	2.6000	5.0
SIMW-2	06/03/97	2.1100	2.0
SIMW-2	11/04/97	3.9500	9.0
SIMW-2	06/16/98	2.3200	3.0
SIMW-2	06/16/98	2.3700	4.0
SIMW-2	10/06/98	3.9700	10.0
SIMW-2	10/06/98	2.8300	6.0

aaaaaaaaaaaa

Compliance Well Rank Sum: 58.0

Compliance Well Rank Avg: 6.4

SIMW-3	08/16/95	8.9600	16.0
SIMW-3	06/10/96	9.2500	20.0
SIMW-3	10/22/96	9.0900	18.0
SIMW-3	06/03/97	9.0800	17.0
SIMW-3	11/04/97	9.5300	21.0
SIMW-3	11/04/97	9.2000	19.0
SIMW-3	06/16/98	12.2000	23.0
SIMW-3	10/06/98	11.0000	22.0

Compliance Well Rank Sum: 156.0
Compliance Well Rank Avg: 19.5

H Statistic: 16.1836
H Adjusted for Ties: 16.1836
Degrees of Freedom: 2
Chi-Squared: 5.9915
ZA/DF: 1.9600

* Indicates significant evidence of contamination

Well ID	Crit. Diff.	Rank Avg.	Background Rank Avg.	Difference
SIMW-2	7.0061	6.44	10.33	-3.89
*SIMW-3	7.1791	19.50	10.33	9.17

Kruskal-Wallace Test
Report Printed: 12-28-1998 12:04

Facility:D&A160 Sanitation, Inc.

Address:P.O. Box 882

City:Lewistown ST:MT Zip:59457
County:FERGUS

Contact:Bill Spoya
Phone:() -

Permit Type:Detection

Constituent:SO4 dis Sulfate, dissolved

CAS Number:14808-79-8

MCL: 0.000 mg/l

ACL: 0.000 mg/l

Detect Limit: 0.001 mg/l

Start Date:Aug 16 1995

End Date:Jun 03 1999

Data Mode:Original

Background Wells

Well ID	N	%ND	Max Value	Min Value	Mean	Std Dev
SIMW-1	3	0	95.00	81.00	89.33	7.37
SIP-2	1	0	95.00	95.00	95.00	0.00

Compliance Wells

Well ID	N	%ND	Max Value	Min Value	Mean	Std Dev
SIMW-2	9	0	224.00	191.00	204.78	10.07
SIMW-3	8	0	140.00	128.00	133.12	4.39

Well ID	Date	Observation	Rank
---------	------	-------------	------

SIMW-1	08/16/95	95.0000	3.5
SIMW-1	06/03/97	92.0000	2.0
SIMW-1	11/04/97	81.0000	1.0
SIP-2	11/26/96	95.0000	3.5

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	Background Rank Sum:	10.0	
	Background Rank Avg:	2.5	
SIMW-2	08/16/95	224.0000	21.0
SIMW-2	06/10/96	195.0000	14.0
SIMW-2	10/22/96	214.0000	20.0
SIMW-2	06/03/97	202.0000	16.5
SIMW-2	11/04/97	211.0000	19.0
SIMW-2	06/16/98	201.0000	15.0
SIMW-2	06/16/98	202.0000	16.5
SIMW-2	10/06/98	203.0000	18.0
SIMW-2	10/06/98	191.0000	13.0

aaaaaaaaaaaa

Compliance Well Rank Sum:		153.0	
Compliance Well Rank Avg:		17.0	
SIMW-3	08/16/95	140.0000	12.0
SIMW-3	06/10/96	139.0000	11.0
SIMW-3	10/22/96	133.0000	9.0
SIMW-3	06/03/97	134.0000	10.0
SIMW-3	11/04/97	131.0000	7.5
SIMW-3	11/04/97	131.0000	7.5
SIMW-3	06/16/98	129.0000	6.0
SIMW-3	10/06/98	128.0000	5.0

aaaaaaaaaaaa

Compliance Well Rank Sum:		68.0
Compliance Well Rank Avg:		8.5

H Statistic:	17.2208
H Adjusted for Ties:	17.2544
Degrees of Freedom:	2
Chi-Squared:	5.9915
ZA/DF:	1.9600

* Indicates significant evidence of contamination

Well ID	Crit. Diff.	Rank Avg.	Background Rank Avg.	Difference
*SIMW-2	7.2604	17.00	2.50	14.50
SIMW-3	7.3987	8.50	2.50	6.00

Prediction Intervals

Report Printed: 12-28-1998 12:07

Facility:D&A160 Sanitation, Inc.

Address:P.O. Box 882

City:Lewistown ST:MT Zip:59457
County:FERGUS

Contact:Bill Spoya
Phone:() -

Permit Type:Detection

Constituent:Cond Specific Conductivity

CAS Number: - -
MCL: 0.000 umhos/cm
ACL: 0.000 umhos/cm
Detect Limit: 1.000 umhos/cm

Start Date:Aug 16 1995
End Date:Jun 03 1999

Data Mode:Original

Background Data

Well ID	Date	Observation
UQA	08/16/95	958.0000
UQA	11/26/96	822.0000
UQA	06/03/97	786.0000
UQA	11/04/97	751.0000

Summary Statistics

Observations: 4
Mean: 829.250
Std Dev: 90.596
Shapiro-Wilk: 1.003

1% Critical Value: 0.687
5% Critical Value: 0.748

Future Data

Well:SIMW-2

Date	Observation
10/06/98	1140.0000
10/06/98	1130.0000

Summary Statistics

Observations: 2
Mean: 829.250
Std Dev: 90.596

Prediction Intervals

Significance Level:0.050000

Date Range	Observations	Mean	Interval
*10/06/98-10/31/98	2	1135.000	[0.0- 1013.892]

* Since the Mean for this period exceeds the upper prediction limit,
there is significant evidence of contamination.

Prediction Intervals

Report Printed: 12-28-1998 12:08

Facility:D&A160 Sanitation, Inc.

Address:P.O. Box 882

City:Lewistown ST:MT Zip:59457
County:FERGUS

Contact:Bill Spoya
Phone:() -

Permit Type:Detection

Constituent:Chld dis Chloride, dissolved

CAS Number:16887-00-6

MCL: 0.000 mg/l

ACL: 0.000 mg/l

Detect Limit: 0.001 mg/l

Start Date:Aug 16 1995

End Date:Jun 03 1999

Data Mode:Original

Background Data

Well ID	Date	Observation
---------	------	-------------

iUQÄ:	08/16/95	26000.0000
iUQÄ:	11/26/96	28000.0000
iUQÄ:	06/03/97	25000.0000
iUQÄ:	11/04/97	24000.0000

Summary Statistics

Observations:	4
Mean:	25750.000
Std Dev:	1707.825
Shapiro-Wilk:	1.091

1% Critical Value: 0.687
5% Critical Value: 0.748

Future Data

Well:SIMW-2

Date	Observation
10/06/98	56000.0000
10/06/98	51000.0000

Summary Statistics

Observations: 2
Mean: 25750.000
Std Dev: 1707.825

Prediction Intervals

Significance Level:0.050000

Date Range	Observations	Mean	Interval
*10/06/98-10/31/98	2	53500.000	[0.0- 29230.695]

* Since the Mean for this period exceeds the upper prediction limit,
there is significant evidence of contamination.

Prediction Intervals

Report Printed: 12-28-1998 12:08

Facility:D&A160 Sanitation, Inc.

Address:P.O. Box 882

City:Lewistown ST:MT Zip:59457
County:FERGUS

Contact:Bill Spoya
Phone:() -

Permit Type:Detection

Constituent:NO3/NO2 Nitrate,Nitrite

CAS Number: - -
MCL: 0.000 mg/l
ACL: 0.000 mg/l
Detect Limit: 0.000 mg/l

Start Date:Aug 16 1995
End Date:Jun 03 1999

Data Mode:Original

Background Data

Well ID	Date	Observation
---------	------	-------------

UQA	08/16/95	4490.0000
UQA	06/10/96	4240.0000
UQA	11/26/96	1790.0000
UQA	06/03/97	5560.0000
UQA	11/04/97	3740.0000
UQA	10/06/98	5520.0000

Summary Statistics

Observations:	6
Mean:	4223.333
Std Dev:	1392.418
Shapiro-Wilk:	0.926

1% Critical Value: 0.713
5% Critical Value: 0.788

Future Data

Well:SIMW-3

Date	Observation
10/06/98	11000.0000

Summary Statistics

Observations: 1
Mean: 4223.333
Std Dev: 1392.418

Prediction Intervals

Significance Level:0.050000

Date Range	Observations	Mean	Interval
*10/06/98-10/31/98	1	11000.000	[0.0- 7253.932]

* Since the Mean for this period exceeds the upper prediction limit,
there is significant evidence of contamination.

Prediction Intervals

Report Printed: 12-28-1998 12:09

Facility:D&A160 Sanitation, Inc.

Address:P.O. Box 882

City:Lewistown
County:FERGUS

ST:MT Zip:59457

Contact:Bill Spoya
Phone:() -

Permit Type:Detection

Constituent:SO4 dis Sulfate, dissolved

CAS Number:14808-79-8

MCL: 0.000 mg/l
ACL: 0.000 mg/l
Detect Limit: 0.001 mg/l

Start Date:Aug 16 1995
End Date:Jun 03 1999

Data Mode:Original

Background Data

Well ID	Date	Observation
iÜQÄi	08/16/95	95000.0000

UQA;	11/26/96	95000.0000
UQA;	06/03/97	92000.0000
UQA;	11/04/97	81000.0000

Summary Statistics

Observations:	4
Mean:	90750.000
Std Dev:	6652.067
Shapiro-Wilk:	0.867

1% Critical Value: 0.687
5% Critical Value: 0.748

Future Data

Well: SIMW-2

Date	Observation
10/06/98	203000.0000
10/06/98	191000.0000

Summary Statistics

Observations: 2
Mean: 90750.000
Std Dev: 6652.067

Prediction Intervals

Significance Level: 0.050000

Date Range	Observations	Mean	Interval
*10/06/98-10/31/98	2	197000.000	[0.0- 104307.492]

* Since the Mean for this period exceeds the upper prediction limit, there is significant evidence of contamination.

Prediction Intervals

Report Printed: 12-28-1998 12:10

Facility:D&A160

Sanitation, Inc.

Address:P.O. Box 882

City:Lewistown
County:FERGUS

ST:MT Zip:59457

Contact:Bill Spoya
Phone:() -

Permit Type:Detection

Constituent:Cond Specific Conductivity

CAS Number: - -

MCL: 0.000 umhos/cm

ACL: 0.000 umhos/cm

Detect Limit: 1.000 umhos/cm

Start Date:Aug 16 1995

End Date:Jun 03 1999

Data Mode:Original

Background Data

Well ID	Date	Observation
SIMW-2	08/16/95	1480.0000
SIMW-2	06/10/96	1180.0000
SIMW-2	10/22/96	1180.0000
SIMW-2	06/03/97	1040.0000
SIMW-2	11/04/97	1110.0000
SIMW-2	06/16/98	1150.0000
SIMW-2	06/16/98	1150.0000

Summary Statistics

Observations: 7
Mean: 1184.286
Std Dev: 139.147
Shapiro-Wilk: 0.739

1% Critical Value: 0.730
5% Critical Value: 0.803

Future Data

Well:SIMW-2

Date	Observation
------	-------------

10/06/98	1140.0000
10/06/98	1130.0000

Summary Statistics

Observations: 2
Mean: 1184.286
Std Dev: 139.147

Prediction Intervals

Significance Level:0.050000

Date Range	Observations	Mean	Interval
10/06/98-12/31/98	2	1135.000 [0.0-	1401.078]

* Since the Mean for this period exceeds the upper prediction limit,
there is significant evidence of contamination.

Prediction Intervals

Report Printed: 12-28-1998 12:11

Facility:D&A160 Sanitation, Inc.

Address:P.O. Box 882

City:Lewistown ST:MT Zip:59457
County:FERGUS

Contact:Bill Spoya
Phone:() -

Permit Type:Detection

Constituent:Chld dis Chloride, dissolved

CAS Number:16887-00-6

MCL: 0.000 mg/l

ACL: 0.000 mg/l

Detect Limit: 0.001 mg/l

Start Date:Aug 16 1995

End Date:Jun 03 1999

Data Mode:Original

Background Data

Well ID	Date	Observation
---------	------	-------------

1% Critical Value: 0.730
5% Critical Value: 0.803

Future Data

Well:SIMW-2

Date	Observation
------	-------------

10/06/98	56000.0000
10/06/98	51000.0000

Summary Statistics

Observations: 2
Mean: 57142.855
Std Dev: 5336.308

Prediction Intervals

Significance Level:0.050000

Date Range	Observations	Mean	Interval
10/06/98-12/31/98	2	53500.000	[0.0- 65456.879]

* Since the Mean for this period exceeds the upper prediction limit,
there is significant evidence of contamination.

Prediction Intervals

Report Printed: 12-28-1998 12:11

Facility:D&A160 Sanitation, Inc.

Address:P.O. Box 882

City:Lewistown ST:MT Zip:59457
County:FERGUS

Contact:Bill Spoya
Phone:() -

Permit Type:Detection

Constituent:NO3/NO2 Nitrate,Nitrite

CAS Number: - -
MCL: 0.000 mg/l
ACL: 0.000 mg/l
Detect Limit: 0.000 mg/l

Start Date:Aug 16 1995
End Date:Jun 03 1999

Data Mode:Original

Background Data

Well ID	Date	Observation
---------	------	-------------

SIMW-3	08/16/95	8960.0000
SIMW-3	06/10/96	9250.0000
SIMW-3	10/22/96	9090.0000
SIMW-3	06/03/97	9080.0000
SIMW-3	11/04/97	9530.0000
SIMW-3	11/04/97	9200.0000
SIMW-3	06/16/98	12200.0000

Summary Statistics

Observations:	7
Mean:	9615.714
Std Dev:	1153.673
Shapiro-Wilk:	0.573

1% Critical Value: 0.730
5% Critical Value: 0.803

Future Data

Well:SIMW-3

Date	Observation
------	-------------

10/06/98	11000.0000
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Summary Statistics

Observations: 1
Mean: 9615.714
Std Dev: 1153.673

Prediction Intervals

Significance Level:0.050000

Date Range	Observations	Mean	Interval
10/06/98-12/31/98	1	11000.000	[0.0- 12012.294]

* Since the Mean for this period exceeds the upper prediction limit,
there is significant evidence of contamination.

Prediction Intervals

Report Printed: 12-28-1998 12:12

Facility:D&A160 Sanitation, Inc.

Address:P.O. Box 882

City:Lewistown ST:MT Zip:59457
County:FERGUS

Contact:Bill Spoya
Phone:() -

Permit Type:Detection

Constituent:SO4 dis Sulfate, dissolved

CAS Number:14808-79-8

MCL: 0.000 mg/l

ACL: 0.000 mg/l

Detect Limit: 0.001 mg/l

Start Date:Aug 16 1995

End Date:Jun 03 1999

Data Mode:Original

Background Data

Well ID	Date	Observation
---------	------	-------------

SIMW-2	08/16/95	224000.0000
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SIMW-2	06/10/96	195000.0000
SIMW-2	10/22/96	214000.0000
SIMW-2	06/03/97	202000.0000
SIMW-2	11/04/97	211000.0000
SIMW-2	06/16/98	201000.0000
SIMW-2	06/16/98	202000.0000

Summary Statistics

Observations:	7
Mean:	207000.000
Std Dev:	9865.765
Shapiro-Wilk:	0.805

Observations:	7
Mean:	207000.000
Std Dev:	9865.765

Start Date	End Date	Mean	Interval
06/06/96	12/31/98	197000.000	223470.369

* Since the Mean for this period exceeds the upper prediction limit, there is significant evidence of nonstationarity.

1% Critical Value: 0.730
5% Critical Value: 0.803

Future Data

Well:SIMW-2

Date	Observation
10/06/98	203000.0000
10/06/98	191000.0000

Summary Statistics

Observations: 2
Mean: 207000.000
Std Dev: 9865.765

Prediction Intervals

Significance Level:0.050000

Date Range	Observations	Mean	Interval
10/06/98-12/31/98	2	197000.000	[0.0- 222370.969]

* Since the Mean for this period exceeds the upper prediction limit,
there is significant evidence of contamination.

Page 1

Kruskal-Wallis Test
Report Printed: 12-28-1998 12:14

Facility:D&A160 Sanitation, Inc.

Address:P.O. Box 882

City:Lewistown
County:FERGUS

ST:MT Zip:59457

Contact:Bill Spoya
Phone:() -

Permit Type:Detection

Constituent:1,1,1Tri 1,1,1-Trichloroethane

CAS Number: 71-55-6

MCL: 0.000 ug/l

ACL: 0.000 ug/l

Detect Limit: 1.000 ug/l

Start Date:Aug 16 1995

End Date:Jun 03 1999

Data Mode:Original

Background Wells

Well ID	N	%ND	Max Value	Min Value	Mean	Std Dev
SIMW-1	5	0	0.77	0.34	0.52	0.19
SIP-2	2	100	0.50	0.50	0.50	0.00

Compliance Wells

Well ID	N	%ND	Max Value	Min Value	Mean	Std Dev
SIMW-2	10	60	0.50	0.18	0.44	0.10
SIMW-3	8	88	0.54	0.50	0.50	0.01

Well ID	Date	Observation	Rank
SIMW-1	08/16/95	0.6700	24.0
SIMW-1	06/10/96	0.3400	17.0
SIMW-1	06/03/97	0.7700	25.0
SIMW-1	11/04/97	0.4000	20.0
SIMW-1	10/06/98	0.4200	21.5
SIP-2	11/26/96	0.5000	8.0
SIP-2	06/16/98	0.5000	8.0

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Background Rank	Sum:	123.5
Background Rank	Avg:	17.6

SIMW-2	08/16/95	0.5000	8.0
SIMW-2	06/10/96	0.1800	16.0
SIMW-2	10/22/96	0.5000	8.0
SIMW-2	06/03/97	0.5000	8.0
SIMW-2	06/03/97	0.5000	8.0
SIMW-2	11/04/97	0.4200	21.5
SIMW-2	06/16/98	0.5000	8.0

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Compliance Well Rank Sum:	122.3
Compliance Well Rank Avg:	12.3

SIMW-3	08/18/98	0.5000	8.0
SIMW-3	10/06/98	0.5000	8.0

Compliance Well Rank Sum: 79.0

compliance with rank Avg. 9.9

ZÁ/DF: 1.9600

* Indicates significant evidence of contamination

Well ID	Crit. Diff.	Rank	Avg. Background	Rank	Avg. Difference
---------	-------------	------	-----------------	------	-----------------

BMW 3	1.4541	3.88	17.81	1.777
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Report Printed: 12-28-1998 12:15

Facility:D&A160 Sanitation, Inc.

Address: P.O. Box 882

City:Lewistown ST:MT Zip:59457

County: FERGUS

Phone: () -

Permit Type:Detection

Constituent:1,1,1Tri 1,1,1-Trichloroethane

CAS Number: 71-55-6

MCL: 0.000 ug/l

ACL: 0.000 ug/l

Detect Limit: 1.000 ug/l

Start Date: Aug 16 1995

End Date: Jun 03 1999

Data Mode:Original

Background Data

Well ID	Date	Observation
---------	------	-------------

SIMW-2	08/16/95	0.5000
SIMW-2	06/10/96	0.1800
SIMW-2	10/22/96	0.5000
SIMW-2	06/03/97	0.5000
SIMW-2	06/03/97	0.5000
SIMW-2	11/04/97	0.4200
SIMW-2	06/16/98	0.5000
SIMW-2	06/16/98	0.5000

Summary Statistics

Observations:	8
Mean:	0.450
Std Dev:	0.113
Shapiro-Wilk:	0.541

Date Range	Observations	Mean	Interval
10/05/98-12/31/98	2	0.175 10.0	0.012 1

* Since the Mean for this period exceeds the upper prediction limit, there is significant evidence of contamination.

Contamination Intervals

Report Printed 11-19-1998 12:15

Facility Details Sanitation, Inc.

Address: P.O. Box 882

City: Westtown
County: Chester

ST. MT Dig: 29437

Contact: Bill Spoya
Phone: 1

Permit Type Description

Concentration: 1.1 mg/L 1.1 mg/L Trichloroethene

Test Results: 11-98

MCL: 0.005 ug/l

MCL: 0.005 ug/l

Upper Limit: 1.000 ug/l

Start Date: Aug 16 1998

End Date: Jan 01 1999

Permit Information

Approved Data

Well ID Date Observation

1% Critical Value: 0.749
5% Critical Value: 0.818

Future Data

Well:SIMW-2

Date	Observation
10/06/98	0.3900
10/06/98	0.3600

Summary Statistics

Observations: 2
Mean: 0.450
Std Dev: 0.113

Prediction Intervals

Significance Level:0.050000

Date Range	Observations	Mean	Interval
10/06/98-12/31/98	2	0.375	[0.0- 0.619]

* Since the Mean for this period exceeds the upper prediction limit,
there is significant evidence of contamination.

Prediction Intervals

Report Printed: 12-28-1998 12:15

Facility:D&A160 Sanitation, Inc.

Address:P.O. Box 882

City:Lewistown ST:MT Zip:59457
County:FERGUS

Contact:Bill Spoya
Phone:() -

Permit Type:Detection

Constituent:1,1,1Tri 1,1,1-Trichloroethane

CAS Number: 71-55-6
MCL: 0.000 ug/l
ACL: 0.000 ug/l
Detect Limit: 1.000 ug/l

Start Date:Aug 16 1995
End Date:Jun 03 1999

Data Mode:Original

Background Data

Well ID	Date	Observation
---------	------	-------------

SIMW-1	08/16/95	0.6700
SIMW-1	06/10/96	0.3400
SIMW-1	06/03/97	0.7700
SIMW-1	11/04/97	0.4000

Summary Statistics

Observations:	4
Mean:	0.545
Std Dev:	0.208
Shapiro-Wilk:	1.004

1% Critical Value: 0.687
5% Critical Value: 0.748

Future Data

Well:SIMW-1

Date	Observation
10/06/98	0.4200

Summary Statistics

Observations: 1
Mean: 0.545
Std Dev: 0.208

Prediction Intervals

Significance Level:0.050000

Date Range	Observations	Mean	Interval
10/06/98-12/31/98	1	0.420 [0.0-	1.091]

* Since the Mean for this period exceeds the upper prediction limit,
there is significant evidence of contamination.

Prediction Intervals

Report Printed: 12-28-1998 12:17

Facility:D&A160 Sanitation, Inc.

Address:P.O. Box 882

City:Lewistown ST:MT Zip:59457
County:FERGUS

Contact:Bill Spoya
Phone:() -

Permit Type:Detection

Constituent:DC1DF1Me Dichlorodifluoromethane

CAS Number: 75-71-8
MCL: 0.000 ug/l
ACL: 0.000 ug/l
Detect Limit: 1.000 ug/l

Start Date:Aug 16 1995
End Date:Jun 03 1999

Data Mode:Original

Background Data

Well ID	Date	Observation
;ÜQÄ;	08/16/95	0.6500

ÜQÄ	06/10/96	0.5800
ÜQÄ	11/26/96	1.3000
ÜQÄ	06/03/97	0.5300
ÜQÄ	11/04/97	0.6800
ÜQÄ	06/16/98	1.8000
ÜQÄ	10/06/98	0.5400

Summary Statistics

Observations:	7
Mean:	0.869
Std Dev:	0.490
Shapiro-Wilk:	0.654

1% Critical Value: 0.730
5% Critical Value: 0.803

Future Data

Well:SIMW-2

Date	Observation
------	-------------

10/06/98	0.2800
10/06/98	0.2800

Summary Statistics

Observations: 2
Mean: 0.869
Std Dev: 0.490

Prediction Intervals

Significance Level:0.050000

Date Range	Observations	Mean	Interval
10/06/98-12/31/98	2	0.280 [0.0-	1.633]

* Since the Mean for this period exceeds the upper prediction limit,
there is significant evidence of contamination.

Prediction Intervals

Report Printed: 12-28-1998 12:17

Facility:D&A160 Sanitation, Inc.

Address:P.O. Box 882

City:Lewistown ST:MT Zip:59457
County:FERGUS

Contact:Bill Spoya
Phone:() -

Permit Type:Detection

Constituent:DC1DF1Me Dichlorodifluoromethane

CAS Number: 75-71-8
MCL: 0.000 ug/l
ACL: 0.000 ug/l
Detect Limit: 1.000 ug/l

Start Date:Aug 16 1995
End Date:Jun 03 1999

Data Mode:Original

Background Data

Well ID	Date	Observation
---------	------	-------------

UQA	08/16/95	0.6500
UQA	06/10/96	0.5800
UQA	11/26/96	1.3000
UQA	06/03/97	0.5300
UQA	11/04/97	0.6800
UQA	06/16/98	1.8000
UQA	10/06/98	0.5400

Summary Statistics

Observations: 7
 Mean: 0.869
 Std Dev: 0.490
 Shapiro-Wilk: 0.654

Observations: 7
 Mean: 0.869
 Std Dev: 0.490

Confidence Intervals

Significance Level: 0.050000

Lower Bound	Upper Bound	Mean	Interval
0.04/00	12/11/98	0.430	10.0

* Since the mean for this period exceeds the upper prediction limit, there is significant evidence of contamination.

Shapiro-Wilk Test

Report Printed: 12-22-1998 12:17

Facility: 00149 Sanitation, Inc.

Address: P.O. Box 342

City: Lewistown
 County: 15003

Contact: Bill Spivey
 Phone: 1

Sample Type: Detection

Configuration: 100% No. 100% 100% 100%

Test Method: 75-71-1
 A.L. 0.000 ug/l
 SCL 0.000 ug/l
 Detect Limit 1.000 ug/l

Start Date: Aug 16 1995
 End Date: Jan 23 1999

Data from: 00149

Background: 0.000

File ID: 00149

Printed: 08/16/95 0.6500

1% Critical Value: 0.730
5% Critical Value: 0.803

Future Data

Well:SIMW-3

Date	Observation
10/06/98	0.4500

Summary Statistics

Observations: 1
Mean: 0.869
Std Dev: 0.490

Prediction Intervals

Significance Level:0.050000

Date Range	Observations	Mean	Interval
10/06/98-12/31/98	1	0.450 [0.0-	1.887]

* Since the Mean for this period exceeds the upper prediction limit,
there is significant evidence of contamination.

Prediction Intervals

Report Printed: 12-28-1998 12:17

Facility:D&A160 Sanitation, Inc.

Address:P.O. Box 882

City:Lewistown ST:MT Zip:59457
County:FERGUS

Contact:Bill Spoya
Phone:() -

Permit Type:Detection

Constituent:DC1DF1Me Dichlorodifluoromethane

CAS Number: 75-71-8

MCL: 0.000 ug/l

ACL: 0.000 ug/l

Detect Limit: 1.000 ug/l

Start Date:Aug 16 1995

End Date:Jun 03 1999

Data Mode:Original

Background Data

Well ID	Date	Observation
SIMW-1	08/16/95	0.6500

Summary Statistics

Observations:	4
Mean:	0.610
Std Dev:	0.068
Shapiro-Wilk:	1.070

1% Critical Value: 0.687
5% Critical Value: 0.748

Future Data

Well:SIMW-1

Date	Observation
------	-------------

10/06/98	0.5400
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Summary Statistics

Observations: 1
Mean: 0.610
Std Dev: 0.068

Prediction Intervals

Significance Level:0.050000

Date Range	Observations	Mean	Interval
10/06/98-12/31/98	1	0.540 [0.0-	0.788]

* Since the Mean for this period exceeds the upper prediction limit,
there is significant evidence of contamination.

Prediction Intervals

Report Printed: 12-28-1998 12:18

Facility:D&A160 Sanitation, Inc.

Address:P.O. Box 882

City:Lewistown ST:MT Zip:59457
County:FERGUS

Contact:Bill Spoya
Phone:() -

Permit Type:Detection

Constituent:DC1DF1Me Dichlorodifluoromethane

CAS Number: 75-71-8

MCL: 0.000 ug/l

ACL: 0.000 ug/l

Detect Limit: 1.000 ug/l

Start Date:Aug 16 1995

End Date:Jun 03 1999

Data Mode:Original

Background Data

Well ID	Date	Observation
---------	------	-------------

SIMW-2	08/16/95	0.5000
--------	----------	--------

Summary Statistics

Observations:	8
Mean:	0.396
Std Dev:	0.145
Shapiro-Wilk:	0.714

1% Critical Value: 0.749
5% Critical Value: 0.818

Future Data

Well:SIMW-2

Date	Observation
------	-------------

10/06/98	0.2800
10/06/98	0.2800

Summary Statistics

Observations: 2
Mean: 0.396
Std Dev: 0.145

Prediction Intervals

Significance Level:0.050000

Date Range	Observations	Mean	Interval
10/06/98-12/31/98	2	0.280	[0.0- 0.613]

* Since the Mean for this period exceeds the upper prediction limit,
there is significant evidence of contamination.

Prediction Intervals

Report Printed: 12-28-1998 12:18

Facility:D&A160 Sanitation, Inc.

Address:P.O. Box 882

City:Lewistown
County:FERGUS

ST:MT Zip:59457

Contact:Bill Spoya
Phone:() -

Permit Type:Detection

Constituent:DC1DF1Me Dichlorodifluoromethane

CAS Number: 75-71-8
MCL: 0.000 ug/l
ACL: 0.000 ug/l
Detect Limit: 1.000 ug/l

Start Date:Aug 16 1995
End Date:Jun 03 1999

Data Mode:Original

Background Data

Well ID	Date	Observation
---------	------	-------------

SIMW-3	08/16/95	0.2000
SIMW-3	06/10/96	0.5000
SIMW-3	10/22/96	0.5000
SIMW-3	06/03/97	0.5000
SIMW-3	11/04/97	0.5000
SIMW-3	11/04/97	0.5000
SIMW-3	06/16/98	1.2000

Summary Statistics

Observations: 7
 Mean: 0.557
 Std Dev: 0.305
 Shapiro-Wilk: 0.703

Confidence Interval

Significance Level: 0.050000

Lower Bound	Upper Bound
0.250000	0.864000

Since the Mean for this period exceeds the upper prediction limit, there is significant evidence of contamination.

Report Printed: 11-25-1998 13:23

Facility: Dallas

Address: P.O. Box 587

City: Lewisville
County: Tarrant

Contact: Bill Spivey
Phone: (817) 941-1111

Permit Type: Detection

Unit: mg/L (Methyl Ethyl Ketone)

MDL	0.000 mg/L
MCL	0.000 mg/L
Detected Limit	1.000 mg/L

Start Date: Aug 16 1995
End Date: Jun 03 1998

See Note 019-003

Background Value

MDL	MCL	Detected Limit	Unit
0.000	0.000	1.000	mg/L

1% Critical Value: 0.730
5% Critical Value: 0.803

Future Data

Well:SIMW-3

Date	Observation
10/06/98	0.4500

Summary Statistics

Observations: 1
Mean: 0.557
Std Dev: 0.305

Prediction Intervals

Significance Level:0.050000

Date Range	Observations	Mean	Interval
10/06/98-12/31/98	1	0.450 [0.0-	1.190]

* Since the Mean for this period exceeds the upper prediction limit,
there is significant evidence of contamination.

Kruskal-Wallace Test

Report Printed: 12-28-1998 12:19

Facility:D&A160 Sanitation, Inc.

Address:P.O. Box 882

City:Lewistown ST:MT Zip:59457
County:FERGUS

Contact:Bill Spoya
Phone:() -

Permit Type:Detection

Constituent:TClFlMe Trichlorofluoromethane

CAS Number: 75-69-4

MCL: 0.000 ug/l

ACL: 0.000 ug/l

Detect Limit: 1.000 ug/l

Start Date:Aug 16 1995

End Date:Jun 03 1999

Data Mode:Original

Background Wells

Well ID	N	%ND	Max Value	Min Value	Mean	Std Dev
SIMW-1	5	0	0.49	0.33	0.41	0.07

SIP-2 2 0 1.40 0.32 0.86 0.76

Compliance Wells

Well ID	N	%ND	Max Value	Min Value	Mean	Std Dev
SIMW-2	10	60	1.40	0.15	0.49	0.36
SIMW-3	8	63	1.40	0.17	0.54	0.38

Well ID	Date	Observation	Rank
SIMW-1	08/16/95	0.4900	22.0
SIMW-1	06/10/96	0.4000	20.0
SIMW-1	06/03/97	0.4700	21.0
SIMW-1	11/04/97	0.3300	18.0
SIMW-1	10/06/98	0.3700	19.0
SIP-2	11/26/96	0.3200	17.0
SIP-2	06/16/98	1.4000	24.0

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Background Rank Sum: 141.0

Background Rank Avg: 20.1

SIMW-2	08/16/95	0.5000	6.0
SIMW-2	06/10/96	0.1600	13.0
SIMW-2	10/22/96	0.1500	12.0
SIMW-2	06/03/97	0.5000	6.0
SIMW-2	06/03/97	0.5000	6.0
SIMW-2	11/04/97	0.2000	15.0
SIMW-2	06/16/98	1.4000	24.0
SIMW-2	06/16/98	0.5000	6.0
SIMW-2	10/06/98	0.5000	6.0
SIMW-2	10/06/98	0.5000	6.0

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Compliance Well Rank Sum: 100.0

Compliance Well Rank Avg: 10.0

SIMW-3	08/16/95	0.1700	14.0
SIMW-3	06/10/96	0.5000	6.0
SIMW-3	10/22/96	0.5000	6.0
SIMW-3	06/03/97	0.5000	6.0
SIMW-3	11/04/97	0.5000	6.0
SIMW-3	11/04/97	0.5000	6.0
SIMW-3	06/16/98	1.4000	24.0
SIMW-3	10/06/98	0.2200	16.0

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Compliance Well Rank Sum: 84.0

Compliance Well Rank Avg: 10.5

H Statistic: 9.1780

H Adjusted for Ties: 10.0264

Degrees of Freedom: 2

Chi-Squared: 5.9915

ZÁ/DF: 1.9600

* Indicates significant evidence of contamination

Well ID	Crit. Diff.	Rank Avg.	Background Rank Avg.	Difference
SIMW-2	7.0977	10.00	20.14	-10.14
SIMW-3	7.4541	10.50	20.14	-9.64

Prediction Intervals

Report Printed: 12-28-1998 12:19

Facility:D&A160

Sanitation, Inc.

Address:P.O. Box 882

City:Lewistown
County:FERGUS

ST:MT Zip:59457

Contact:Bill Spoya
Phone:() -

Permit Type:Detection

Constituent:TClFlMe Trichlorofluoromethane

CAS Number: 75-69-4
MCL: 0.000 ug/l
ACL: 0.000 ug/l
Detect Limit: 1.000 ug/l

Start Date:Aug 16 1995
End Date:Jun 03 1999

Data Mode:Original

Background Data

Well ID	Date	Observation
UQA	08/16/95	0.4900
UQA	06/10/96	0.4000
UQA	11/26/96	0.3200
UQA	06/03/97	0.4700
UQA	11/04/97	0.3300
UQA	06/16/98	1.4000
UQA	10/06/98	0.3700

Summary Statistics

Observations: 7
Mean: 0.540
Std Dev: 0.385
Shapiro-Wilk: 0.581

1% Critical Value: 0.730
5% Critical Value: 0.803

Future Data

Well:SIMW-2

Date	Observation
10/06/98	0.5000
10/06/98	0.5000

Summary Statistics

Observations: 2
Mean: 0.540
Std Dev: 0.385

Prediction Intervals

Significance Level:0.050000

Date Range	Observations	Mean	Interval
10/06/98-12/31/98	2	0.500 [0.0-	1.139]

* Since the Mean for this period exceeds the upper prediction limit,
there is significant evidence of contamination.

Prediction Intervals

Report Printed: 12-28-1998 12:19

Facility:D&A160 Sanitation, Inc.

Address:P.O. Box 882

City:Lewistown ST:MT Zip:59457
County:FERGUS

Contact:Bill Spoya
Phone:() -

Permit Type:Detection

Constituent:TClFlMe Trichlorofluoromethane

CAS Number: 75-69-4
MCL: 0.000 ug/l
ACL: 0.000 ug/l
Detect Limit: 1.000 ug/l

Start Date:Aug 16 1995
End Date:Jun 03 1999

Data Mode:Original

Background Data

Well ID	Date	Observation
---------	------	-------------

:UQA:	08/16/95	0.4900
:UQA:	06/10/96	0.4000
:UQA:	11/26/96	0.3200
:UQA:	06/03/97	0.4700
:UQA:	11/04/97	0.3300
:UQA:	06/16/98	1.4000
:UQA:	10/06/98	0.3700

Summary Statistics

Observations:	7
Mean:	0.540
Std Dev:	0.385
Shapiro-Wilk:	0.581

Observations:	1
Mean:	0.510
Std Dev:	0.140

Significance Level: 0.050000

Date Range	Interpretation	Mean	Interval
08/08/95-11/11/95	1	0.330 0.3	1.330 1

* Since the Mean for this period exceeds the upper prediction limit, there is significant evidence of contamination.

Facility Data

Facility Name: 12-22-1998 12-22

Facility Address: 12-22-1998 12-22

Address: P.O. Box 342

City: Lewistown

State: PA 17047

County: Franklin

Contact: Bill Spoke

Phone: 717-326-1111

Formal Type Detection

Concentration of Contaminants

MLL	0.100 ug/l
MLL	0.500 ug/l
MLL	1.000 ug/l

Report Date: Aug 16 1999

Exp Date: Jan 03 1999

Data Notes

Background Data

Date	Observation
08/16/95	0.4900

Date	08/16/95	0.4900
------	----------	--------

1% Critical Value: 0.730
5% Critical Value: 0.803

Future Data

Well:SIMW-3

Date	Observation
10/06/98	0.2200

Summary Statistics

Observations: 1
Mean: 0.540
Std Dev: 0.385

Prediction Intervals

Significance Level:0.050000

Date Range	Observations	Mean	Interval
10/06/98-12/31/98	1	0.220 [0.0-	1.339]

* Since the Mean for this period exceeds the upper prediction limit,
there is significant evidence of contamination.

Prediction Intervals

Report Printed: 12-28-1998 12:21

Facility:D&A160 Sanitation, Inc.

Address:P.O. Box 882

City:Lewistown ST:MT Zip:59457
County:FERGUS

Contact:Bill Spoya
Phone:() -

Permit Type:Detection

Constituent:TCLFlMe Trichlorofluoromethane

CAS Number: 75-69-4

MCL: 0.000 ug/l

ACL: 0.000 ug/l

Detect Limit: 1.000 ug/l

Start Date:Aug 16 1995

End Date:Jun 03 1999

Data Mode:Original

Background Data

Well ID	Date	Observation
SIMW-1	08/16/95	0.4900

SIMW-1	06/10/96	0.4000
SIMW-1	06/03/97	0.4700
SIMW-1	11/04/97	0.3300

Summary Statistics

Observations: 4
 Mean: 0.422
 Std Dev: 0.073
 Shapiro-Wilk: 1.045

Observations: 4
 Mean: 0.422
 Std Dev: 0.073

Significance Interval

Significance Level: 0.050000

Mean	0.422	Lower	0.376	Upper	0.468
Std Dev	0.073				

* Since the Mean for this period exceeds the upper prediction limit, there is significant evidence of contamination.

Statistical Summary

Report Printed: 11-10-1999 11:22

Facility: F&B, Inc.

Address: P.O. Box 982

City: Lowelltown
 County: F&B, Inc.

ST. MT Sig-0417

Contact: Neil Spivey
 Phone: 1

Permit Type: Detection

Consolidated: F&B, Inc. Air Pollution Control

CAS Number	1-88-2
ML	0.000 ug/l
ACH	0.000 ug/l
Detect Limit	1.000 ug/l

Start Date: Aug 14 1995
 End Date: Dec 31 1999

Permit Number: 0-101

Permit Type: Detection

Permit No: 0-101

SIMW-2 05/16/97 0.5300

1% Critical Value: 0.687
5% Critical Value: 0.748

Future Data

Well:SIMW-1

Date	Observation
10/06/98	0.3700

Summary Statistics

Observations: 1
Mean: 0.422
Std Dev: 0.073

Prediction Intervals

Significance Level:0.050000

Date Range	Observations	Mean	Interval
10/06/98-12/31/98	1	0.370 [0.0-	0.614]

* Since the Mean for this period exceeds the upper prediction limit,
there is significant evidence of contamination.

Prediction Intervals

Report Printed: 12-28-1998 12:22

Facility:D&A160 Sanitation, Inc.

Address:P.O. Box 882

City:Lewistown ST:MT Zip:59457
County:FERGUS

Contact:Bill Spoya
Phone:() -

Permit Type:Detection

Constituent:TClFlMe Trichlorofluoromethane

CAS Number: 75-69-4

MCL: 0.000 ug/l

ACL: 0.000 ug/l

Detect Limit: 1.000 ug/l

Start Date:Aug 16 1995

End Date:Jun 03 1999

Data Mode:Original

Background Data

Well ID	Date	Observation
SIMW-2	08/16/95	0.5000

1% Critical Value: 0.749
5% Critical Value: 0.818

Future Data

Well:SIMW-2

Date	Observation
10/06/98	0.5000
10/06/98	0.5000

Summary Statistics

Observations: 2
Mean: 0.489
Std Dev: 0.403

Prediction Intervals

Significance Level:0.050000

Date Range	Observations	Mean	Interval
10/06/98-12/31/98	2	0.500 [0.0-	1.092]

* Since the Mean for this period exceeds the upper prediction limit,
there is significant evidence of contamination.

Prediction Intervals

Report Printed: 12-28-1998 12:22

Facility:D&A160 Sanitation, Inc.

Address:P.O. Box 882

City:Lewistown ST:MT Zip:59457
County:FERGUS

Contact:Bill Spoya
Phone:() -

Permit Type:Detection

Constituent:TClFlMe Trichlorofluoromethane

CAS Number: 75-69-4

MCL: 0.000 ug/l

ACL: 0.000 ug/l

Detect Limit: 1.000 ug/l

Start Date:Aug 16 1995

End Date:Jun 03 1999

Data Mode:Original

Background Data

Well ID	Date	Observation
---------	------	-------------

SIMW-3	08/16/95	0.1700
SIMW-3	06/10/96	0.5000
SIMW-3	10/22/96	0.5000
SIMW-3	06/03/97	0.5000
SIMW-3	11/04/97	0.5000
SIMW-3	11/04/97	0.5000
SIMW-3	06/16/98	1.4000

Summary Statistics

Observations:	7
Mean:	0.581
Std Dev:	0.381
Shapiro-Wilk:	0.679

Observations:	7
Mean:	0.581
Std Dev:	0.381

Significance Level: 0.05000

Test Statistic	Shapiro-Wilk
Value	0.679

Since the test for this period exceeds the upper prediction limit, there is significant evidence of contamination.

1% Critical Value: 0.730
5% Critical Value: 0.803

Future Data

Well:SIMW-3

Date	Observation
10/06/98	0.2200

Summary Statistics

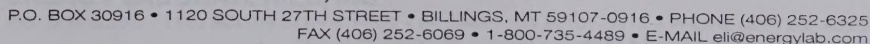
Observations: 1
Mean: 0.581
Std Dev: 0.381

Prediction Intervals

Significance Level:0.050000

Date Range	Observations	Mean	Interval
10/06/98-12/31/98	1	0.220 [0.0-	1.374]

* Since the Mean for this period exceeds the upper prediction limit,
there is significant evidence of contamination.



Page: 1

Lab No. : 98-63874 lms
Date : 21-OCT-98

WATER ANALYSIS REPORT

Sanitation Inc., Lewistown

Sample ID : SIMW-1
Sample Date : 06-OCT-98
Sample Time : 1030
Sample Received : 07-OCT-98

RECEIVED

OCT 27 1998

DAMSCHEN & ASSOCIATES

Constituents	Report	Results	Units	Re- marks	Method	- -Analysis- -		
	Limit					Date	Time	By
Nitrate plus Nitrite as N	0.05	5.52	mg/l		353.2	12-OCT-98	1650	BAS
Ammonia	0	0.00	mg/l		353.2	12-OCT-98	1650	BAS
Ammonia (as N) - max. 4 hrs	0	0.00	mg/l		353.2	12-OCT-98	1650	BAS
Ammonia (as N) - max. 4 hrs	0.05	7.1	mg/l		353.2	09-OCT-98	1650	BAS
Ammonia plus Nitrite as N	0.05	0.00	mg/l		353.2	12-OCT-98	1650	BAS
Total Cyanide	0.005	<0.005	mg/l		353.2	09-OCT-98	1650	BAS
Cyanide (as Cyanide)	0	0	mg/l		353.2	12-OCT-98	1650	BAS
Hydrogen Sulfide	<0.05	<0.05	mg/l		353.2	09-OCT-98	1650	BAS
Hydrogen Sulfide	<0.05	<0.05	mg/l		353.2	12-OCT-98	1650	BAS
Hydrogen Sulfide	0.1	0.1	mg/l		353.2	12-OCT-98	1650	BAS
Hydrogen Sulfide	<0.05	<0.05	mg/l		353.2	09-OCT-98	1650	BAS
Cyanide (as Cyanide)	0.005	<0.005	mg/l		353.2	12-OCT-98	1650	BAS
Cyanide (as Cyanide)	0.05	<0.05	mg/l		353.2	09-OCT-98	1650	BAS
Cyanide (as Cyanide)	0.05	<0.05	mg/l		353.2	12-OCT-98	1650	BAS
Cyanide (as Cyanide)	0.05	<0.05	mg/l		353.2	09-OCT-98	1650	BAS
Cyanide (as Cyanide)	0.05	<0.05	mg/l		353.2	12-OCT-98	1650	BAS
Cyanide (as Cyanide)	0.05	<0.05	mg/l		353.2	09-OCT-98	1650	BAS
Cyanide (as Cyanide)	0.05	<0.05	mg/l		353.2	12-OCT-98	1650	BAS
Cyanide (as Cyanide)	0.05	<0.05	mg/l		353.2	09-OCT-98	1650	BAS
Cyanide (as Cyanide)	0.05	<0.05	mg/l		353.2	12-OCT-98	1650	BAS
Cyanide (as Cyanide)	0.05	<0.05	mg/l		353.2	09-OCT-98	1650	BAS
Cyanide (as Cyanide)	0.05	<0.05	mg/l		353.2	12-OCT-98	1650	BAS
Cyanide (as Cyanide)	0.05	<0.05	mg/l		353.2	09-OCT-98	1650	BAS
Cyanide (as Cyanide)	0.05	<0.05	mg/l		353.2	12-OCT-98	1650	BAS
Cyanide (as Cyanide)	0.05	<0.05	mg/l		353.2	09-OCT-98	1650	BAS
Cyanide (as Cyanide)	0.05	<0.05	mg/l		353.2	12-OCT-98	1650	BAS
Cyanide (as Cyanide)	0.05	<0.05	mg/l		353.2	09-OCT-98	1650	BAS
Cyanide (as Cyanide)	0.05	<0.05	mg/l		353.2	12-OCT-98	1650	BAS
Cyanide (as Cyanide)	0.05	<0.05	mg/l		353.2	09-OCT-98	1650	BAS
Cyanide (as Cyanide)	0.05	<0.05	mg/l		353.2	12-OCT-98	1650	BAS
Cyanide (as Cyanide)	0.05	<0.05	mg/l		353.2	09-OCT-98	1650	BAS
Cyanide (as Cyanide)	0.05	<0.05	mg/l		353.2	12-OCT-98	1650	BAS
Cyanide (as Cyanide)	0.05	<0.05	mg/l		353.2	09-OCT-98	1650	BAS
Cyanide (as Cyanide)	0.05	<0.05	mg/l		353.2	12-OCT-98	1650	BAS
Cyanide (as Cyanide)	0.05	<0.05	mg/l		353.2	09-OCT-98	1650	BAS
Cyanide (as Cyanide)	0.05	<0.05	mg/l		353.2	12-OCT-98	1650	BAS
Cyanide (as Cyanide)	0.05	<0.05	mg/l		353.2	09-OCT-98	1650	BAS
Cyanide (as Cyanide)	0.05	<0.05	mg/l		353.2	12-OCT-98	1650	BAS
Cyanide (as Cyanide)	0.05	<0.05	mg/l		353.2	09-OCT-98	1650	BAS
Cyanide (as Cyanide)	0.05	<0.05	mg/l		353.2	12-OCT-98	1650	BAS
Cyanide (as Cyanide)	0.05	<0.05	mg/l		353.2	09-OCT-98	1650	BAS
Cyanide (as Cyanide)	0.05	<0.05	mg/l		353.2	12-OCT-98	1650	BAS
Cyanide (as Cyanide)	0.05	<0.05	mg/l		353.2	09-OCT-98	1650	BAS
Cyanide (as Cyanide)	0.05	<0.05	mg/l		353.2	12-OCT-98	1650	BAS
Cyanide (as Cyanide)	0.05	<0.05	mg/l		353.2	09-OCT-98	1650	BAS
Cyanide (as Cyanide)	0.05	<0.05	mg/l		353.2	12-OCT-98	1650	BAS
Cyanide (as Cyanide)	0.05	<0.05	mg/l		353.2	09-OCT-98	1650	

**ENERGY LABORATORIES, INC.**P.O. BOX 30916 • 1120 SOUTH 27TH STREET • BILLINGS, MT 59107-0916 • PHONE (406) 252-6325
FAX (406) 252-6069 • 1-800-735-4489 • E-MAIL eli@energylab.com**LABORATORY REPORT**

Page: 1

To : Damschen and Associates, Inc.
Address : Bruce Siegmund
PO Box 4817
Helena, MT 59604

Lab No. : 98-63875 lims
Date : 21-OCT-98

WATER ANALYSIS REPORT

Sanitation Inc., Lewistown

Sample ID : SIMW-2
Sample Date : 06-OCT-98
Sample Time : 1215
Sample Received : 07-OCT-98

Constituents	Report		Units	Re- marks	Method	- -Analysis- -		
	Limit	Results				Date	Time	By
Sulfate	1	203	mg/l		300.0	14-OCT-98	2325	SKW
Chloride	1	56	mg/l		300.0	14-OCT-98	2325	SKW
Specific Conductance @ 25 C	1	1140	umhos/cm		120.1	07-OCT-98	1816	QED
pH	0.1	7.1	s.u.		150.1	07-OCT-98	1816	QED
Nitrate plus Nitrite as N	0.05	3.97	mg/l		353.2	12-OCT-98	1651	BAS
Total Cyanide	0.005	<0.005	mg/l	U	335.3	09-OCT-98	1030	ND
Chemical Oxygen Demand	1	7	mg/l		410.4	16-OCT-98	1130	BS
Antimony, Dissolved	0.05	<0.05	mg/l	U	200.7	09-OCT-98	1249	RLH
Arsenic, Dissolved	0.005	<0.005	mg/l	U	200.8	13-OCT-98	1403	LAB
Barium, Dissolved	0.1	<0.1	mg/l	U	200.7	09-OCT-98	1249	RLH
Beryllium, Dissolved	0.001	<0.001	mg/l	U	200.7	09-OCT-98	1249	RLH
Cadmium, Dissolved	0.001	<0.001	mg/l	U	200.8	13-OCT-98	1403	LAB
Chromium, Dissolved	0.01	<0.01	mg/l	U	200.7	09-OCT-98	1249	RLH
Cobalt, Dissolved	0.01	<0.01	mg/l	U	200.7	09-OCT-98	1249	RLH
Copper, Dissolved	0.01	<0.01	mg/l	U	200.7	09-OCT-98	1249	RLH
Iron, Dissolved	0.03	0.05	mg/l		200.7	09-OCT-98	1249	RLH
Lead, Dissolved	0.01	<0.01	mg/l	U	200.8	13-OCT-98	1403	LAB
Mercury, Dissolved	0.001	<0.001	mg/l	U	200.8	13-OCT-98	1403	LAB
Nickel, Dissolved	0.01	0.07	mg/l		200.7	09-OCT-98	1249	RLH
Selenium, Dissolved	0.005	0.006	mg/l		200.8	13-OCT-98	1403	LAB
Silver, Dissolved	0.005	<0.005	mg/l	U	200.8	13-OCT-98	1403	LAB
Thallium, Dissolved	0.1	<0.1	mg/l	U	200.8	13-OCT-98	1403	LAB
Vanadium, Dissolved	0.1	<0.1	mg/l	U	200.7	09-OCT-98	1249	RLH
Zinc, Dissolved	0.01	0.02	mg/l		200.7	09-OCT-98	1249	RLH

U Indicates the parameter was analyzed but not detected.

**ENERGY LABORATORIES, INC.**P.O. BOX 30916 • 1120 SOUTH 27TH STREET • BILLINGS, MT 59107-0916 • PHONE (406) 252-6325
FAX (406) 252-6069 • 1-800-735-4489 • E-MAIL eli@energylab.com**LABORATORY REPORT**

Page: 1

To : Damschen and Associates, Inc.
Address : Bruce Siegmund
PO Box 4817
Helena, MT 59604

Lab No. : 98-63876 lms
Date : 21-OCT-98

WATER ANALYSIS REPORT

Sanitation Inc., Lewistown

Sample ID : SIMW-2A
Sample Date : 06-OCT-98
Sample Time : 1215
Sample Received : 07-OCT-98

Constituents	Report		Units	Re- marks	Method	- -Analysis- -		
	Limit	Results				Date	Time	By
Sulfate	1	191	mg/l		300.0	14-OCT-98	2346	SKW
Chloride	1	51	mg/l		300.0	14-OCT-98	2346	SKW
Specific Conductance @ 25 C	1	1130	umhos/cm		120.1	07-OCT-98	1818	QED
pH	0.1	7.1	s.u.		150.1	07-OCT-98	1818	QED
Nitrate plus Nitrite as N	0.05	2.83	mg/l		353.2	12-OCT-98	1651	BAS
Total Cyanide	0.005	<0.005	mg/l	U	335.3	09-OCT-98	1030	ND
Chemical Oxygen Demand	1	8	mg/l		410.4	16-OCT-98	1130	BS
Antimony, Dissolved	0.05	<0.05	mg/l	U	200.7	09-OCT-98	1257	RLH
Arsenic, Dissolved	0.005	<0.005	mg/l	U	200.8	13-OCT-98	1409	LAB
Barium, Dissolved	0.1	<0.1	mg/l	U	200.7	09-OCT-98	1257	RLH
Beryllium, Dissolved	0.001	<0.001	mg/l	U	200.7	09-OCT-98	1257	RLH
Cadmium, Dissolved	0.001	<0.001	mg/l	U	200.8	13-OCT-98	1409	LAB
Chromium, Dissolved	0.01	<0.01	mg/l	U	200.7	09-OCT-98	1257	RLH
Cobalt, Dissolved	0.01	<0.01	mg/l	U	200.7	09-OCT-98	1257	RLH
Copper, Dissolved	0.01	<0.01	mg/l	U	200.7	09-OCT-98	1257	RLH
Iron, Dissolved	0.03	<0.03	mg/l	U	200.7	09-OCT-98	1257	RLH
Lead, Dissolved	0.01	<0.01	mg/l	U	200.8	13-OCT-98	1409	LAB
Mercury, Dissolved	0.001	<0.001	mg/l	U	200.8	13-OCT-98	1409	LAB
Nickel, Dissolved	0.01	<0.01	mg/l	U	200.8	13-OCT-98	1409	LAB
Selenium, Dissolved	0.005	0.005	mg/l		200.8	13-OCT-98	1409	LAB
Silver, Dissolved	0.005	<0.005	mg/l	U	200.8	13-OCT-98	1409	LAB
Thallium, Dissolved	0.1	<0.1	mg/l	U	200.8	13-OCT-98	1409	LAB
Vanadium, Dissolved	0.1	<0.1	mg/l	U	200.7	09-OCT-98	1257	RLH
Zinc, Dissolved	0.01	0.02	mg/l		200.7	09-OCT-98	1257	RLH

U Indicates the parameter was analyzed but not detected.

**ENERGY LABORATORIES, INC.**P.O. BOX 30916 • 1120 SOUTH 27TH STREET • BILLINGS, MT 59107-0916 • PHONE (406) 252-6325
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Page: 1

To : Damschen and Associates, Inc.
Address : Bruce Siegmund
PO Box 4817
Helena, MT 59604

Lab No. : 98-63877 lms
Date : 21-OCT-98

WATER ANALYSIS REPORT

Sanitation Inc., Lewistown

Sample ID : SIMW-3
Sample Date : 06-OCT-98
Sample Time : 1315
Sample Received : 07-OCT-98

Constituents	Report		Units	Re- marks	Method	- -Analysis- -		
	Limit	Results				Date	Time	By
Sulfate	1	128	mg/l		300.0	14-OCT-98	2356	SKW
Chloride	1	25	mg/l		300.0	14-OCT-98	2356	SKW
Specific Conductance @ 25 C	1	731	umhos/cm		120.1	07-OCT-98	1820	QED
pH	0.1	8.0	s.u.		150.1	07-OCT-98	1820	QED
Nitrate plus Nitrite as N	0.05	11.0	mg/l		353.2	12-OCT-98	1652	BAS
Total Cyanide	0.005	<0.005	mg/l	U	335.3	09-OCT-98	1030	ND
Chemical Oxygen Demand	1	9	mg/l		410.4	16-OCT-98	1130	BS
Antimony, Dissolved	0.05	<0.05	mg/l	U	200.7	09-OCT-98	1259	RLH
Arsenic, Dissolved	0.005	<0.005	mg/l	U	200.8	13-OCT-98	1414	LAB
Barium, Dissolved	0.1	<0.1	mg/l	U	200.7	09-OCT-98	1259	RLH
Beryllium, Dissolved	0.001	<0.001	mg/l	U	200.7	09-OCT-98	1259	RLH
Cadmium, Dissolved	0.001	<0.001	mg/l	U	200.8	13-OCT-98	1414	LAB
Chromium, Dissolved	0.01	<0.01	mg/l	U	200.7	09-OCT-98	1259	RLH
Cobalt, Dissolved	0.01	<0.01	mg/l	U	200.7	09-OCT-98	1259	RLH
Copper, Dissolved	0.01	<0.01	mg/l	U	200.7	09-OCT-98	1259	RLH
Iron, Dissolved	0.03	<0.03	mg/l	U	200.7	09-OCT-98	1259	RLH
Lead, Dissolved	0.01	<0.01	mg/l	U	200.8	13-OCT-98	1414	LAB
Mercury, Dissolved	0.001	<0.001	mg/l	U	200.8	13-OCT-98	1414	LAB
Nickel, Dissolved	0.01	<0.01	mg/l	U	200.7	09-OCT-98	1259	RLH
Selenium, Dissolved	0.005	0.017	mg/l		200.8	13-OCT-98	1414	LAB
Silver, Dissolved	0.005	<0.005	mg/l	U	200.8	13-OCT-98	1414	LAB
Thallium, Dissolved	0.1	<0.1	mg/l	U	200.8	13-OCT-98	1414	LAB
Vanadium, Dissolved	0.1	<0.1	mg/l	U	200.7	09-OCT-98	1259	RLH
Zinc, Dissolved	0.01	0.01	mg/l		200.7	09-OCT-98	1259	RLH

U Indicates the parameter was analyzed but not detected.

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Client: Damschen and Associates, Inc.

Date Sampled: 06-OCT-98 10:30

Date Received: 07-OCT-98

Analysis Date: 10-OCT-1998 17:26

Project Info: Sanitation Inc., Lewistown

Sample Info: SIMW-1

Lab No.: 98-63874

Report Date: 10/13/98 09:43

Extraction Method: EPA 5030

Sample Matrix: WATER; pH= < 2

EPA METHOD 8260A: VOLATILE ORGANICS ANALYSIS REPORT

CONCENTRATION UNITS = ug/L (ppb)			
COMPOUNDS	CAS NO.	RESULT	QUALIFIER
Acetone	67-64-1	<50	U
Acrylonitrile	107-13-1	<20	U
Benzene	71-43-2	<1.0	U
Bromochloromethane	74-97-5	<1.0	U
Bromodichloromethane	75-27-4	<1.0	U
Bromoform	75-25-2	<1.0	U
Bromomethane	74-83-9	<1.0	U
Carbon disulfide	75-15-0	<1.0	U
Carbon tetrachloride	56-23-5	<1.0	U
Chlorobenzene	108-90-7	<1.0	U
Chlorodibromomethane	124-48-1	<1.0	U
Chloroethane	75-00-3	<1.0	U
Chloroform	67-66-3	<1.0	U
Chloromethane	74-87-3	<1.0	U
1,2-Dibromo-3-chloropropane	96-12-8	<1.0	U
1,2-Dibromoethane	106-93-4	<1.0	U
Dibromomethane	74-95-3	<1.0	U
1,2-Dichlorobenzene	95-50-1	<1.0	U
1,4-Dichlorobenzene	106-46-7	<1.0	U
trans-1,4-Dichloro-2-butene	110-57-6	<2.0	U
Dichlorodifluoromethane	75-71-8	<1.0	0.54J
1,1-Dichloroethane	75-34-3	<1.0	U
1,2-Dichloroethane	107-06-2	<1.0	U
1,1-Dichloroethene	75-35-4	<1.0	U
cis-1,2-Dichloroethene	156-59-2	<1.0	U
trans-1,2-Dichloroethene	156-60-5	<1.0	U
1,2-Dichloropropane	78-87-5	<1.0	U
cis-1,3-Dichloropropene	10061-01-5	<1.0	U
trans-1,3-Dichloropropene	10061-02-6	<1.0	U
Ethylbenzene	100-41-4	<1.0	U
2-Hexanone	591-78-6	<20	U
Iodomethane	74-88-4	<1.0	U
Methyl ethyl ketone	78-93-3	<20	U
Methyl isobutyl ketone	108-10-1	<20	U
Methylene chloride	75-09-2	<1.0	U
Styrene	100-42-5	<1.0	U
1,1,1,2-Tetrachloroethane	630-20-6	<1.0	U
1,1,2,2-Tetrachloroethane	79-34-5	<1.0	U
Tetrachloroethene	127-18-4	<1.0	U
Toluene	108-88-3	<1.0	U
1,1,1-Trichloroethane	71-55-6	<1.0	0.42J
1,1,2-Trichloroethane	79-00-5	<1.0	U
Trichloroethene	79-01-6	<1.0	U
Trichlorofluoromethane	75-69-4	<1.0	0.37J
1,2,3-Trichloropropane	96-18-4	<1.0	U
Vinyl acetate	108-05-4	<1.0	U
Vinyl chloride	75-01-4	<1.0	U
m+p-Xylenes	108383/106423	<1.0	U
o-Xylene	95-47-6	<1.0	U

SURROGATE RECOVERY REPORT

Surrogate Compound	Added-ug/L	Measured-ug/L	%Rec	QC Limits
1,2-Dichloroethane d4	10.0	10.1	101	80--120
Toluene d8	10.0	9.94	99	80--120
p-Bromofluorobenzene	10.0	10.3	103	80--120

QUALIFIER CODE EXPLANATIONS AND NOTES:

U= Indicates compound was analyzed for but not detected.

J= Estimated value. Present, but less than the limit of quantitation.

REPORT COMMENTS: None

Analyst: CSReviewing Supervisor: MB

/chem/5971A.1/val01098.b/oct101001010.d

**ENERGY LABORATORIES, INC.**P.O. BOX 30916 • 1120 SOUTH 27TH STREET • BILLINGS, MT 59107-0916 • PHONE (406) 252-6325
FAX (406) 252-6069 • 1-800-735-4489 • E-MAIL eli@energylab.comClient: Damschen and Associates, Inc.
Date Sampled: 06-OCT-98 12:15
Date Received: 07-OCT-98
Analysis Date: 10-OCT-1998 18:03
Project Info: Sanitation Inc., Lewistown
Sample Info: SIMW-2Lab No.: 98-63875
Report Date: 10/13/98 09:43
Extraction Method: EPA 5030
Sample Matrix: WATER; pH= < 2**EPA METHOD 8260A: VOLATILE ORGANICS ANALYSIS REPORT**

COMPOUNDS	CAS NO.	CONCENTRATION UNITS - ug/L (ppb)	RESULT	QUALIFIER
Acetone	67-64-1		<50	U
Acrylonitrile	107-13-1		<20	U
Benzene	71-43-2		<1.0	U
Bromochloromethane	74-97-5		<1.0	U
Bromodichloromethane	75-27-4		<1.0	U
Bromoform	75-25-2		<1.0	U
Bromomethane	74-83-9		<1.0	U
Carbon disulfide	75-15-0		<1.0	U
Carbon tetrachloride	56-23-5		<1.0	U
Chlorobenzene	108-90-7		<1.0	U
Chlorodibromomethane	124-48-1		<1.0	U
Chloroethane	75-00-3		<1.0	U
Chloroform	67-66-3		<1.0	U
Chloromethane	74-87-3		<1.0	U
1,2-Dibromo-3-chloropropane	96-12-8		<1.0	U
1,2-Dibromoethane	106-93-4		<1.0	U
Dibromomethane	74-95-3		<1.0	U
1,2-Dichlorobenzene	95-50-1		<1.0	U
1,4-Dichlorobenzene	106-46-7		<1.0	U
trans-1,4-Dichloro-2-butene	110-57-6		<2.0	U
Dichlorodifluoromethane	75-71-8		<1.0	0.28J
1,1-Dichloroethane	75-34-3		<1.0	U
1,2-Dichloroethane	107-06-2		<1.0	U
1,1-Dichloroethene	75-35-4		<1.0	U
cis-1,2-Dichloroethene	156-59-2		<1.0	U
trans-1,2-Dichloroethene	156-60-5		<1.0	U
1,2-Dichloropropane	78-87-5		<1.0	U
cis-1,3-Dichloropropene	10061-01-5		<1.0	U
trans-1,3-Dichloropropene	10061-02-6		<1.0	U
Ethylbenzene	100-41-4		<1.0	U
2-Hexanone	591-78-6		<20	U
Iodomethane	74-88-4		<1.0	U
Methyl ethyl ketone	78-93-3		<20	U
Methyl isobutyl ketone	108-10-1		<20	U
Methylene chloride	75-09-2		<1.0	U
Styrene	100-42-5		<1.0	U
1,1,1,2-Tetrachloroethane	630-20-6		<1.0	U
1,1,2,2-Tetrachloroethane	79-34-5		<1.0	U
Tetrachloroethene	127-18-4		<1.0	U
Toluene	108-88-3		<1.0	U
1,1,1-Trichloroethane	71-55-6		<1.0	0.39J
1,1,2-Trichloroethane	79-00-5		<1.0	U
Trichloroethene	79-01-6		<1.0	U
Trichlorofluoromethane	75-69-4		<1.0	U
1,2,3-Trichloropropane	96-18-4		<1.0	U
Vinyl acetate	108-05-4		<1.0	U
Vinyl chloride	75-01-4		<1.0	U
m+p-Xylenes	108383/106423		<1.0	U
o-Xylene	95-47-6		<1.0	U

SURROGATE RECOVERY REPORT

Surrogate Compound	Added-ug/L	Measured-ug/L	%Rec	QC Limits
1,2-Dichloroethane d4	10.0	9.94	99	80--120
Toluene d8	10.0	10.2	102	80--120
p-Bromofluorobenzene	10.0	10.8	108	80--120

QUALIFIER CODE EXPLANATIONS AND NOTES:

U= Indicates compound was analyzed for but not detected.

J= Estimated value. Present, but less than the limit of quantitation.

REPORT COMMENTS: NoneAnalyst: CS Reviewing Supervisor: MB

/chem/5971A.i/va101098.b/oct101101011.d



ENERGY LABORATORIES, INC.

P.O. BOX 30916 • 1120 SOUTH 27TH STREET • BILLINGS, MT 59107-0916 • PHONE (406) 252-6325
FAX (406) 252-6069 • 1-800-735-4489 • E-MAIL eli@energylab.comClient: Damschen and Associates, Inc.
Date Sampled: 06-OCT-98 12:15
Date Received: 07-OCT-98
Analysis Date: 10-OCT-1998 18:39
Project Info: Sanitation Inc., Lewistown
Sample Info: SIMW-2ALab No.: 98-63876
Report Date: 10/13/98 09:43
Extraction Method: EPA 5030
Sample Matrix: WATER; pH= < 2EPA METHOD 8260A: VOLATILE ORGANICS ANALYSIS REPORT

COMPOUNDS	CONCENTRATION UNITS = ug/L (ppb)		QUALIFIER
	CAS NO.	RESULT	
Acetone	67-64-1	<20	U
Acrylonitrile	107-13-1	<20	U
Benzene	71-43-2	<1.0	U
Bromochloromethane	74-97-5	<1.0	U
Bromodichloromethane	75-27-4	<1.0	U
Bromoform	75-25-2	<1.0	U
Bromomethane	74-83-9	<1.0	U
Carbon disulfide	75-15-0	<1.0	U
Carbon tetrachloride	56-23-5	<1.0	U
Chlorobenzene	108-90-7	<1.0	U
Chlorodibromomethane	124-48-1	<1.0	U
Chloroethane	75-00-3	<1.0	U
Chloroform	67-66-3	<1.0	U
Chloromethane	74-87-3	<1.0	U
1,2-Dibromo-3-chloropropane	96-12-8	<1.0	U
1,2-Dibromoethane	106-93-4	<1.0	U
Dibromomethane	74-95-3	<1.0	U
1,2-Dichlorobenzene	95-50-1	<1.0	U
1,4-Dichlorobenzene	106-46-7	<1.0	U
trans-1,4-Dichloro-2-butene	110-57-6	<2.0	U
Dichlorodifluoromethane	75-71-8	<1.0	0.28J
1,1-Dichloroethane	75-34-3	<1.0	U
1,2-Dichloroethane	107-06-2	<1.0	U
1,1-Dichloroethene	75-35-4	<1.0	U
cis-1,2-Dichloroethene	156-59-2	<1.0	U
trans-1,2-Dichloroethene	156-60-5	<1.0	U
1,2-Dichloropropane	78-87-5	<1.0	U
cis-1,3-Dichloropropene	10061-01-5	<1.0	U
trans-1,3-Dichloropropene	10061-02-6	<1.0	U
Ethylbenzene	100-41-4	<1.0	U
2-Hexanone	591-78-6	<20	U
Iodomethane	74-88-4	<1.0	U
Methyl ethyl ketone	78-93-3	<20	U
Methyl isobutyl ketone	108-10-1	<20	U
Methylene chloride	75-09-2	<1.0	U
Styrene	100-42-5	<1.0	U
1,1,1,2-Tetrachloroethane	630-20-6	<1.0	U
1,1,2,2-Tetrachloroethane	79-34-5	<1.0	U
Tetrachloroethene	127-18-4	<1.0	U
Toluene	108-88-3	<1.0	U
1,1,1-Trichloroethane	71-55-6	<1.0	0.36J
1,1,2-Trichloroethane	79-00-5	<1.0	U
Trichloroethene	79-01-6	<1.0	U
Trichlorofluoromethane	75-69-4	<1.0	U
1,2,3-Trichloropropane	96-18-4	<1.0	U
Vinyl acetate	108-05-4	<1.0	U
Vinyl chloride	75-01-4	<1.0	U
m+p-Xylenes	108383/106423	<1.0	U
o-Xylene	95-47-6	<1.0	U

SURROGATE RECOVERY REPORT

Surrogate Compound	Added-ug/L	Measured-ug/L	%Rec	QC Limits
1,2-Dichloroethane d4	10.0	9.83	98	80--120
Toluene d8	10.0	10.3	103	80--120
p-Bromofluorobenzene	10.0	10.7	107	80--120

QUALIFIER CODE EXPLANATIONS AND NOTES:

U= Indicates compound was analyzed for but not detected.

J= Estimated value. Present, but less than the limit of quantitation.

REPORT COMMENTS: None

Analyst: Reviewing Supervisor:

/chem/5971A.i/va101098.b/oct101201012.d



ENERGY LABORATORIES, INC.

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FAX (406) 252-6069 • 1-800-735-4489 • E-MAIL eli@energylab.com

Client: Damschen and Associates, Inc.
Date Sampled: 06-OCT-98 13:15
Date Received: 07-OCT-98
Analysis Date: 10-OCT-1998 19:15
Project Info: Sanitation Inc., Lewistown
Sample Info: SIMW-3

Lab No.: 98-63877
Report Date: 10/13/98 09:43
Extraction Method: EPA 5030
Sample Matrix: WATER; pH= < 2

EPA METHOD 8260A: VOLATILE ORGANICS ANALYSIS REPORT

COMPOUNDS	CAS NO.	CONCENTRATION UNITS = ug/L (ppb)	RESULT	QUALIFIER
Acetone	67-64-1		<50	U
Acrylonitrile	107-13-1		<20	U
Benzene	71-43-2		<1.0	U
Bromochloromethane	74-97-5		<1.0	U
Bromodichloromethane	75-27-4		<1.0	U
Bromoform	75-25-2		<1.0	U
Bromomethane	74-83-9		<1.0	U
Carbon disulfide	75-15-0		<1.0	U
Carbon tetrachloride	56-23-5		<1.0	U
Chlorobenzene	108-90-7		<1.0	U
Chlorodibromomethane	124-48-1		<1.0	U
Chloroethane	75-00-3		<1.0	U
Chloroform	67-66-3		<1.0	U
Chloromethane	74-87-3		<1.0	U
1,2-Dibromo-3-chloropropane	96-12-8		<1.0	U
1,2-Dibromoethane	106-93-4		<1.0	U
Dibromomethane	74-95-3		<1.0	U
1,2-Dichlorobenzene	95-50-1		<1.0	U
1,4-Dichlorobenzene	106-46-7		<1.0	U
trans-1,4-Dichloro-2-butene	110-57-6		<2.0	U
Dichlorodifluoromethane	75-71-8		<1.0	0.45J
1,1-Dichloroethane	75-34-3		<1.0	U
1,2-Dichloroethane	107-06-2		<1.0	U
1,1-Dichloroethene	75-35-4		<1.0	U
cis-1,2-Dichloroethene	156-59-2		<1.0	U
trans-1,2-Dichloroethene	156-60-5		<1.0	U
1,2-Dichloropropane	78-87-5		<1.0	U
cis-1,3-Dichloropropene	10061-01-5		<1.0	U
trans-1,3-Dichloropropene	10061-02-6		<1.0	U
Ethylbenzene	100-41-4		<1.0	U
2-Hexanone	591-78-6		<20	U
Iodomethane	74-88-4		<1.0	U
Methyl ethyl ketone	78-93-3		<20	U
Methyl isobutyl ketone	108-10-1		<20	U
Methylene chloride	75-09-2		<1.0	U
Styrene	100-42-5		<1.0	U
1,1,1,2-Tetrachloroethane	630-20-6		<1.0	U
1,1,2,2-Tetrachloroethane	79-34-5		<1.0	U
Tetrachloroethene	127-18-4		<1.0	U
Toluene	108-88-3		<1.0	U
1,1,1-Trichloroethane	71-55-6		<1.0	U
1,1,2-Trichloroethane	79-00-5		<1.0	U
Trichloroethene	79-01-6		<1.0	U
Trichlorofluoromethane	75-69-4		<1.0	0.22J
1,2,3-Trichloropropane	96-18-4		<1.0	U
Vinyl acetate	108-05-4		<1.0	U
Vinyl chloride	75-01-4		<1.0	U
m+p-Xylenes	108383/106423		<1.0	U
o-Xylene	95-47-6		<1.0	U

SURROGATE RECOVERY REPORT

Surrogate Compound	Added-ug/L	Measured-ug/L	%Rec	QC Limits
1,2-Dichloroethane d4	10.0	9.65	97	80--120
Toluene d8	10.0	10.1	101	80--120
p-Bromofluorobenzene	10.0	10.5	105	80--120

QUALIFIER CODE EXPLANATIONS AND NOTES:

U= Indicates compound was analyzed for but not detected.

J= Estimated value. Present, but less than the limit of quantitation.

REPORT COMMENTS: None

Analyst: ES Reviewing Supervisor: MJD

/chem/5971A.i/va101098.b/oct101301013.d



ENERGY LABORATORIES, INC.

P.O. BOX 30916 • 1120 SOUTH 27TH STREET • BILLINGS, MT 59107-0916 • PHONE (406) 252-6325
FAX (406) 252-6069 • 1-800-735-4489 • E-MAIL eli@energylab.com

Client: Damschen and Associates, Inc.
Date Sampled:
Date Received: 07-OCT-98
Analysis Date: 12-OCT-1998 18:52
Project Info: Sanitation Inc., Lewistown
Sample Info: Trip Blank

Lab No.: 98-63878
Report Date: 10/13/98 09:51
Extraction Method: EPA 5030
Sample Matrix: WATER; pH= < 2

EPA METHOD 8260A: VOLATILE ORGANICS ANALYSIS REPORT

COMPOUNDS	CAS NO.	CONCENTRATION UNITS = ug/L (ppb)	RESULT	QUALIFIER
Acetone	67-64-1		<50	U
Acrylonitrile	107-13-1		<20	U
Benzene	71-43-2		<1.0	U
Bromochloromethane	74-97-5		<1.0	U
Bromodichloromethane	75-27-4		<1.0	U
Bromoform	75-25-2		<1.0	U
Bromomethane	74-83-9		<1.0	U
Carbon disulfide	75-15-0		<1.0	U
Carbon tetrachloride	56-23-5		<1.0	U
Chlorobenzene	108-90-7		<1.0	U
Chlorodibromomethane	124-48-1		<1.0	U
Chloroethane	75-00-3		<1.0	U
Chloroform	67-66-3		<1.0	U
Chloromethane	74-87-3		<1.0	U
1,2-Dibromo-3-chloropropane	96-12-8		<1.0	U
1,2-Dibromoethane	106-93-4		<1.0	U
Dibromomethane	74-95-3		<1.0	U
1,2-Dichlorobenzene	95-50-1		<1.0	U
1,4-Dichlorobenzene	106-46-7		<1.0	U
trans-1,4-Dichloro-2-butene	110-57-6		<2.0	U
Dichlorodifluoromethane	75-71-8		<1.0	U
1,1-Dichloroethane	75-34-3		<1.0	U
1,2-Dichloroethane	107-06-2		<1.0	U
1,1-Dichloroethene	75-35-4		<1.0	U
cis-1,2-Dichloroethene	156-59-2		<1.0	U
trans-1,2-Dichloroethene	156-60-5		<1.0	U
1,2-Dichloropropane	78-87-5		<1.0	U
cis-1,3-Dichloropropene	10061-01-5		<1.0	U
trans-1,3-Dichloropropene	10061-02-6		<1.0	U
Ethylbenzene	100-41-4		<1.0	U
2-Hexanone	591-78-6		<20	U
Iodomethane	74-88-4		<1.0	U
Methyl ethyl ketone	78-93-3		<20	U
Methyl isobutyl ketone	108-10-1		<20	U
Methylene chloride	75-09-2		<1.0	U
Styrene	100-42-5		<1.0	U
1,1,1,2-Tetrachloroethane	630-20-6		<1.0	U
1,1,2,2-Tetrachloroethane	79-34-5		<1.0	U
Tetrachloroethene	127-18-4		<1.0	U
Toluene	108-88-3		<1.0	U
1,1,1-Trichloroethane	71-55-6		<1.0	U
1,1,2-Trichloroethane	79-00-5		<1.0	U
Trichloroethene	79-01-6		<1.0	U
Trichlorofluoromethane	75-69-4		<1.0	U
1,2,3-Trichloropropane	96-18-4		<1.0	U
Vinyl acetate	108-05-4		<1.0	U
Vinyl chloride	75-01-4		<1.0	U
m+p-Xylenes	108383/106423		<1.0	U
o-Xylene	95-47-6		<1.0	U

SURROGATE RECOVERY REPORT

Surrogate Compound	Added-ug/L	Measured-ug/L	%Rec	QC Limits
1,2-Dichloroethane d4	10.0	9.61	96	80--120
Toluene d8	10.0	10.3	103	80--120
p-Bromofluorobenzene	10.0	10.3	103	80--120

QUALIFIER CODE EXPLANATIONS AND NOTES:

U= Indicates compound was analyzed for but not detected.

REPORT COMMENTS: None

Analyst: CS

Reviewing Supervisor: MP

/chem/5971A.i/va101298.b/oct121301013.d

Quality Control Sample: Laboratory Reagent Blank 10-OCT-1998 14:57

Report Date: 10/13/98 09:43

Extraction Method: EPA 5030

Sample Matrix: WATER

Remarks: This Laboratory Reagent Blank Quality Control Sample was extracted and analyzed with your set of samples to determine if method analytes or other interferences are present in the laboratory environment, the reagents, or the apparatus.

EPA METHOD 8260A: VOLATILE ORGANICS ANALYSIS REPORT

COMPOUNDS	CONCENTRATION UNITS = ug/L (ppb)		QUALIFIER
	CAS NO.	RESULT	
Acetone	67-64-1	<50	U
Acrylonitrile	107-13-1	<20	U
Benzene	71-43-2	<1.0	U
Bromochloromethane	74-97-5	<1.0	U
Bromodichloromethane	75-27-4	<1.0	U
Bromoform	75-25-2	<1.0	U
Bromomethane	74-83-9	<1.0	U
Carbon disulfide	75-15-0	<1.0	U
Carbon tetrachloride	56-23-5	<1.0	U
Chlorobenzene	108-90-7	<1.0	U
Chlorodibromomethane	124-48-1	<1.0	U
Chloroethane	75-00-3	<1.0	U
Chloroform	67-66-3	<1.0	U
Chloromethane	74-87-3	<1.0	U
1,2-Dibromo-3-chloropropane	96-12-8	<1.0	U
1,2-Dibromoethane	106-93-4	<1.0	U
Dibromomethane	74-95-3	<1.0	U
1,2-Dichlorobenzene	95-50-1	<1.0	U
1,4-Dichlorobenzene	106-46-7	<1.0	U
trans-1,4-Dichloro-2-butene	110-57-6	<2.0	U
Dichlorodifluoromethane	75-71-8	<1.0	U
1,1-Dichloroethane	75-34-3	<1.0	U
1,2-Dichloroethane	107-06-2	<1.0	U
1,1-Dichloroethene	75-35-4	<1.0	U
cis-1,2-Dichloroethene	156-59-2	<1.0	U
trans-1,2-Dichloroethene	156-60-5	<1.0	U
1,2-Dichloropropane	78-87-5	<1.0	U
cis-1,3-Dichloropropene	10061-01-5	<1.0	U
trans-1,3-Dichloropropene	10061-02-6	<1.0	U
Ethylbenzene	100-41-4	<1.0	U
2-Hexanone	591-78-6	<20	U
Iodomethane	74-88-4	<1.0	U
Methyl ethyl ketone	78-93-3	<20	U
Methyl isobutyl ketone	108-10-1	<20	U
Methylene chloride	75-09-2	<1.0	U
Styrene	100-42-5	<1.0	U
1,1,1,2-Tetrachloroethane	630-20-6	<1.0	U
1,1,2,2-Tetrachloroethane	79-34-5	<1.0	U
Tetrachloroethene	127-18-4	<1.0	U
Toluene	108-88-3	<1.0	U
1,1,1-Trichloroethane	71-55-6	<1.0	U
1,1,2-Trichloroethane	79-00-5	<1.0	U
Trichloroethene	79-01-6	<1.0	U
Trichlorofluoromethane	75-69-4	<1.0	U
1,2,3-Trichloropropane	96-18-4	<1.0	U
Vinyl acetate	108-05-4	<1.0	U
Vinyl chloride	75-01-4	<1.0	U
m+p-Xylenes	108383/106423	<1.0	U
o-Xylene	95-47-6	<1.0	U
----- SURROGATE RECOVERY REPORT -----			
Surrogate Compound	Added-ug/L	Measured-ug/L	%Rec QC Limits
1,2-Dichloroethane d4	10.0	9.72	97 80--120
Toluene d8	10.0	10.0	100 80--120
p-Bromofluorobenzene	10.0	10.3	103 80--120

QUALIFIER CODE EXPLANATIONS AND NOTES:

U= Indicates compound was analyzed for but not detected.

REPORT COMMENTS: None

Analyst: S

Reviewing Supervisor: mm

/chem/S971A.i/va101098.b/oct100601006.d

Quality Control Sample: Laboratory Reagent Blank 12-OCT-1998 12:45
Report Date: 10/13/98 09:49
Extraction Method: EPA 5030

Sample Matrix: WATER

Remarks: This Laboratory Reagent Blank Quality Control Sample was extracted and analyzed with your set of samples to determine if method analytes or other interferences are present in the laboratory environment, the reagents, or the apparatus.

EPA METHOD 8260A: VOLATILE ORGANICS ANALYSIS REPORT

COMPOUNDS	CONCENTRATION UNITS - ug/L (ppb)		QUALIFIER
	CAS NO.	RESULT	
Acetone	67-64-1	<50	U
Acrylonitrile	107-13-1	<20	U
Benzene	71-43-2	<1.0	U
Bromochloromethane	74-97-5	<1.0	U
Bromodichloromethane	75-27-4	<1.0	U
Bromoform	75-25-2	<1.0	U
Bromomethane	74-83-9	<1.0	U
Carbon disulfide	75-15-0	<1.0	U
Carbon tetrachloride	56-23-5	<1.0	U
Chlorobenzene	108-90-7	<1.0	U
Chlorodibromomethane	124-48-1	<1.0	U
Chloroethane	75-00-3	<1.0	U
Chloroform	67-66-3	<1.0	U
Chloromethane	74-87-3	<1.0	U
1,2-Dibromo-3-chloropropane	96-12-8	<1.0	U
1,2-Dibromoethane	106-93-4	<1.0	U
Dibromomethane	74-95-3	<1.0	U
1,2-Dichlorobenzene	95-50-1	<1.0	U
1,4-Dichlorobenzene	106-46-7	<1.0	U
trans-1,4-Dichloro-2-butene	110-57-6	<2.0	U
Dichlorodifluoromethane	75-71-8	<1.0	U
1,1-Dichloroethane	75-34-3	<1.0	U
1,2-Dichloroethane	107-06-2	<1.0	U
1,1-Dichloroethene	75-35-4	<1.0	U
cis-1,2-Dichloroethene	156-59-2	<1.0	U
trans-1,2-Dichloroethene	156-60-5	<1.0	U
1,2-Dichloropropane	78-87-5	<1.0	U
cis-1,3-Dichloropropene	10061-01-5	<1.0	U
trans-1,3-Dichloropropene	10061-02-6	<1.0	U
Ethylbenzene	100-41-4	<1.0	U
2-Hexanone	591-78-6	<20	U
Iodomethane	74-88-4	<1.0	U
Methyl ethyl ketone	78-93-3	<20	U
Methyl isobutyl ketone	108-10-1	<20	U
Methylene chloride	75-09-2	<1.0	U
Styrene	100-42-5	<1.0	U
1,1,1,2-Tetrachloroethane	630-20-6	<1.0	U
1,1,2,2-Tetrachloroethane	79-34-5	<1.0	U
Tetrachloroethene	127-18-4	<1.0	U
Toluene	108-88-3	<1.0	U
1,1,1-Trichloroethane	71-55-6	<1.0	U
1,1,2-Trichloroethane	79-00-5	<1.0	U
Trichloroethene	79-01-6	<1.0	U
Trichlorofluoromethane	75-69-4	<1.0	U
1,2,3-Trichloropropane	96-18-4	<1.0	U
Vinyl acetate	108-05-4	<1.0	U
Vinyl chloride	75-01-4	<1.0	U
m+p-Xylenes	108383/106423	<1.0	U
o-Xylene	95-47-6	<1.0	U

SURROGATE RECOVERY REPORT

Surrogate Compound	Added-ug/L	Measured-ug/L	%Rec	QC Limits
1,2-Dichloroethane d4	10.0	9.45	94	80--120
Toluene d8	10.0	10.5	105	80--120
p-Bromofluorobenzene	10.0	10.7	107	80--120

QUALIFIER CODE EXPLANATIONS AND NOTES:

U= Indicates compound was analyzed for but not detected.

REPORT COMMENTS: None

Analyst: CS

Reviewing Supervisor: MP

/chem/5971A.i/val01298.b/oct120401004.d

EPA METHOD 8260A: QUALITY ASSURANCE BLANK MATRIX SPIKE REPORT

Quality Control Sample: Reference Sample Analysis 10-OCT-1998 13:29

Report Date: 10/13/98 09:42

Extraction Method: EPA 5030

Sample Matrix: WATER

File: /chem/5971A.i/val01098.b/oct100401004.d

Remarks: This reference sample was spiked into a blank sample matrix then extracted and analyzed with your set of samples to determine if the methodology is in control and to monitor the laboratory's ability to produce accurate results.

Spike Compound	CONCENTRATION UNITS = ug/L (ppb)			
	Added	Measured	%Rec	QC Limits
-----	-----	-----	-----	-----
Acetone	50.0	47.5	95	60--140
Benzene	5.00	4.59	92	60--140
Bromochloromethane	5.00	4.72	94	60--140
Bromodichloromethane	5.00	5.12	102	60--140
Bromoform	5.00	4.86	97	60--140
Bromomethane	5.00	5.53	111	60--140
Carbon tetrachloride	5.00	4.85	97	60--140
Chlorobenzene	5.00	4.77	95	60--140
Chlorodibromomethane	5.00	4.93	99	60--140
Chloroethane	5.00	4.96	99	60--140
Chloroform	5.00	4.69	94	60--140
Chloromethane	5.00	5.86	117	60--140
1,2-Dibromo-3-chloropropane	5.00	4.72	94	60--140
1,2-Dibromoethane	5.00	5.08	102	60--140
Dibromomethane	5.00	5.02	100	60--140
1,2-Dichlorobenzene	5.00	4.59	92	60--140
1,4-Dichlorobenzene	5.00	4.82	96	60--140
Dichlorodifluoromethane	5.00	4.52	90	60--140
1,1-Dichloroethane	5.00	4.58	92	60--140
1,1-Dichloroethene	5.00	4.27	85	60--140
cis-1,2-Dichloroethene	5.00	4.68	94	60--140
trans-1,2-Dichloroethene	5.00	4.57	91	60--140
1,2-Dichloropropane	5.00	5.22	104	60--140
cis-1,3-Dichloropropene	5.00	5.53	111	60--140
trans-1,3-Dichloropropene	5.00	4.95	99	60--140
Ethylbenzene	5.00	5.09	102	60--140
2-Hexanone	50.0	49.2	98	60--140
Methyl ethyl ketone	50.0	43.2	86	60--140
Methyl isobutyl ketone	50.0	49.8	100	60--140
Methylene chloride	5.00	4.58	92	60--140
Styrene	5.00	5.12	102	60--140
1,1,1,2-Tetrachloroethane	5.00	4.98	100	60--140
1,1,2,2-Tetrachloroethane	5.00	5.00	100	60--140
Tetrachloroethene	5.00	4.87	97	60--140
Toluene	5.00	4.89	98	60--140
1,1,1-Trichloroethane	5.00	4.88	98	60--140
1,1,2-Trichloroethane	5.00	5.25	105	60--140
Trichloroethene	5.00	4.80	96	60--140
Trichlorofluoromethane	5.00	5.40	108	60--140
1,2,3-Trichloropropane	5.00	5.10	102	60--140
Vinyl chloride	5.00	5.16	103	60--140
m+p-Xylenes	10.0	9.92	99	60--140
o-Xylene	5.00	5.16	103	60--140

SURROGATE RECOVERY REPORT

Surrogate Compound	Added-ug/L	Measured-ug/L	%Rec	QC Limits
1,2-Dichloroethane d4	10.0	9.72	97	80--120
Toluene d8	10.0	10.3	103	80--120
p-Bromofluorobenzene	10.0	10.3	103	80--120

REPORT COMMENTS: None

Analyst: CS Reviewing Supervisor: MB

Lab No(s). 98-63874 - 98-63877

QUALITY ASSURANCE DATA PACKAGE

This report includes the results of quality assurance tests performed with the sample analyses. They are performed to determine if the methodology is in control and to monitor the laboratory's ability to produce accurate and precise results.

Constituents	Duplicate Analysis		Spiked Analysis	Blank Analysis	Sample Analysis	Accept Range	Date
	--- mg/l (ppm) ---		%	mg/l	mg/l	mg/l	Analyzed
	Original	Duplicate	Recovery	ppm	ppm	ppm	
Sulfate	73	73	110	<1	51	45-55	14-OCT-98
Chloride	<1	<1	108	<1	13	11-15	14-OCT-98
Specific Conductance @ 25 umhos/cm	661	662	N/A	1	N/A	N/A	07-OCT-98
pH s.u.	9.1	9.1	N/A	N/A	N/A	N/A	07-OCT-98
Nitrate plus Nitrite as N	<0.05	<0.05	103	<0.05	2.37	2.04-2.56	12-OCT-98
Total Cyanide	0.005	0.005	88	<0.005	0.164	0.119-0.207	09-OCT-98
Chemical Oxygen Demand	9	8	97	<1	78	70-94	16-OCT-98
Metals Analysis							
Antimony, Dissolved	<0.05	<0.05	96	<0.05	0.95	0.90 - 1.10	09-OCT-98
Arsenic, Dissolved	<0.005	<0.005	97	<0.005	0.052	0.045 - 0.055	13-OCT-98
Barium, Dissolved	1.8	1.9	95	<0.1	0.9	0.9 - 1.1	09-OCT-98
Beryllium, Dissolved	0.006	0.006	93	<0.001	0.549	0.450 - 0.550	09-OCT-98
Cadmium, Dissolved	<0.001	<0.001	94	<0.001	0.051	0.045 - 0.055	13-OCT-98
Chromium, Dissolved	0.08	0.08	96	<0.01	0.93	0.90 - 1.10	09-OCT-98
Cobalt, Dissolved	<0.01	<0.01	94	<0.01	0.91	0.90 - 1.10	09-OCT-98
Copper, Dissolved	0.90	0.92	93	<0.01	0.93	0.90 - 1.10	09-OCT-98
Iron, Dissolved	0.18	0.19	95	<0.03	4.58	4.50 - 5.50	09-OCT-98
Lead, Dissolved	<0.01	<0.01	93	<0.01	0.05	0.04 - 0.06	13-OCT-98
Mercury, Dissolved	<0.001	<0.001	94	<0.001	0.005	0.004 - 0.006	13-OCT-98
Nickel, Dissolved	0.10	0.13	91	<0.01	0.94	0.90 - 1.10	09-OCT-98
Selenium, Dissolved	<0.005	<0.005	95	<0.005	0.050	0.045 - 0.055	13-OCT-98
Silver, Dissolved	<0.005	<0.005	83	<0.005	0.020	0.018 - 0.022	13-OCT-98
Thallium, Dissolved	<0.01	<0.01	93	<0.01	0.05	0.04 - 0.06	13-OCT-98
Vanadium, Dissolved	<0.1	<0.1	98	<0.1	0.9	0.9 - 1.1	09-OCT-98
Zinc, Dissolved	1.20	1.23	96	<0.01	0.92	0.90 - 1.10	09-OCT-98

Lab Nos.: 98-63874 - 98-63878

Date: 07-OCT-98

Received by: Pam Fink

Logged In by: Pam Fink

SAMPLE CONDITION QA/QC REPORT

This report provides information about the condition of the sample(s)
and associated sample custody information on receipt at the laboratory.

Chain of Custody Form
Completed & Signed

Yes Comments: _____

Chain of Custody Seal

No Comments: _____

Intact

N/A Comments: _____

Signature Match Chain of Custody vs. Seal

N/A Comments: _____

Samples Received Cold

Yes Comments: _____

Samples Received Within Holding Time

Yes Comments: _____

Samples Received in Proper Containers

Yes Comments: _____

Samples Received Properly Preserved

Yes Comments: _____

Samples requiring analysis for volatile organics are tested for proper preservation at the time of analysis.
Any preservation problems encountered for these samples are noted on the analytical parameter report pages.

Client notified about sample discrepancies:

Who: _____ By: _____ Date/Time: _____

Method of Shipping: Hand Del.

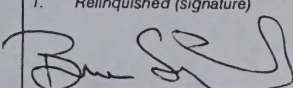
Additional comments: _____

ENERGY LABORATORIES, INC
P.O. Box 30916 1120 South 27th Street
Billings, Montana 59107

toll-free 800-735-4489
voice 406-252-6325
fax 406-252-6069

CHAIN OF CUSTODY RECORD

PLEASE PRINT OR TYPE ALL
INFORMATION EXCEPT SIGNATURES

P.O. #		Project Name / Address		number of containers	Sample Type: A W S V U O Air Water Solids Solids Vegetation Urine Other	Analysis Requested										Comments, Special Instructions, etc.
Contact Name & Phone		Sampler's signature				MT	SOLID WASTE - TABLET	VOC ONLY TABLET	NITRATE + NITRATE-N							
DATE	TIME	composite	grab sample	Invoice to:	Report to:											
				DAMSCHOW + ASSOC POB 4017 HELENA MT 59604	D + A											
SAMPLE ID.																
10/6/98	1030	x		Simw-1	3W	x	x							98-63874		
	1215	x		Simw-2		x								75		
	1215	x		Simw-2A		x								76		
	1315	x		Simw-3		x								77		
				TRIP BLANK										98-63878		
1. Relinquished (signature)		Date	Time	Received by: (signature)		3. Relinquished (signature)		Date	Time	Received by: (signature)						
		10/7/98	1600													
2. Relinquished (signature)		Date	Time	Received by: (signature)		4. Relinquished (signature)		Date	Time	Received for laboratory by (signature):						
								10/7/98	1600	